

Manufacturers Record

Exponent of America



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Baltimore, Md.
JANUARY 29, 1920

Good Highways Lead Upward to Success; Bad Highways Lead Down to Ruin. *Which Will You Choose?*

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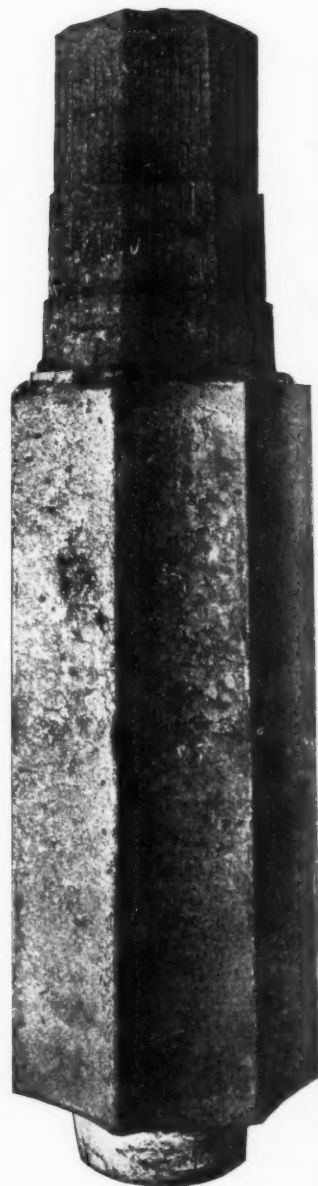
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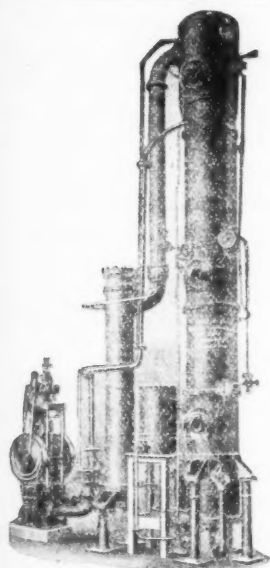
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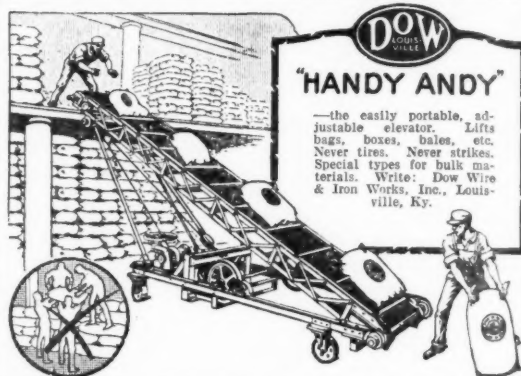
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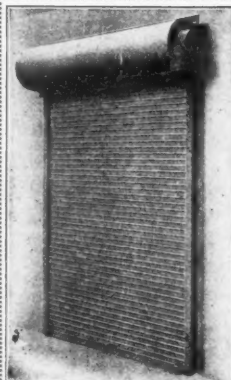
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PROGRESSIVENESS OF SOUTH IN HIGHWAY MATTERS EMPHASIZED.

THE very general determination of the Southern States to build durable, permanent highway systems to meet modern traffic conditions is strikingly emphasized in the special articles in this issue, which show that over four hundred millions of dollars are available for new construction. These important facts are published just prior to the annual meeting of the American Road Builders' Association, to be held in Louisville, Ky., the week of February 9, in order that the progressiveness of the South in highway matters may be brought to the attention of those interested in road building at a time when this subject is receiving such great attention.

In connection with the Louisville convention there will be held a large exhibit of road-building materials, machinery and equipment, and it is believed that the exhibit this year will exceed that of any previous one in the history of this old road-building organization. The program for the convention calls for a broad discussion of many vital problems relating to all important phases of highway development. Such a program, combined with the extensive exhibit of materials and equipment, will afford those in official charge of road matters a splendid opportunity to attend a meeting where they will be able to gather much valuable information that will be helpful to them in their work.

The MANUFACTURERS RECORD will have a booth at the Louisville Road Show, where its representatives will be glad to welcome all of its friends.

DEFLATION WOULD SPELL DISASTER.

FARMERS and laboring people are getting a fairer pay today than ever before in the history of the country. There is more widespread prosperity than this or any other country has ever enjoyed. Manufacturers and their employes are more prosperous, merchants are making more money, farmers and mechanics everywhere are enjoying a hitherto unknown prosperity which is lifting them from the slough of despond in which they have existed for generations.

It is true that high prices and high wages are working a hardship on some classes, but they are very limited in number as compared with those who are being benefited by high wages, and sooner or later there will come an adjustment in their pay which will give to teachers and preachers and clerks salaries commensurate with the cost of living.

It is true that labor is not producing as fully as it should do, but this is only the natural outcome of the changes which have come about by reason of the war and of high prices. The labor unrest is less pronounced than it was some months ago. The coal miners have returned to work, even though the Government made an unwise decision in their case, and they are producing coal freely. All of these changes take time to work out. It would have been folly to expect anything else than what we now see in the labor world following the turmoil of the war. Notwithstanding this almost universal prosperity and the fact that people are living better and more comfortably than ever before, there is a widespread disposition among the financial influences of the country, led by the Federal Reserve Bank, to bring about deflation in order to lessen this activity and to break down prices and wages. There can be no deflation of wages or of prices without bringing on a panicky condition, which would endanger the safety of the country by feeding the fires of Bolshevism.

The situation is entirely unlike anything in the past. It is entirely possible for the Federal Reserve Board to duplicate the panic of 1873, and by somewhat similar methods, but a panic brought on at the present time through deflation would be a very different panic from that which caused such disaster in '73. It seems incomprehensible that financiers cannot understand that, as the war was fought on high wages and inflation, any attempt to lessen the inflation which exists in this country for some years to come would prove disastrous to the nation and to every interest in it. Deflation would spell disaster, and the Federal Reserve Board and all other banking interests which have thought of deflation as the road to better-

ment of the nation's condition may rest assured that it would be a straight highway down to ruin.

No one can for a moment question the facts that some wages are entirely too high, that some laborers are inefficient and not producing in proportion to pay, any more than they would question the fact that many lines of manufactured goods are entirely too high and are yielding an unfair profit to the producers. The laborers are not more to blame than any manufacturers whose profits are too big and than many merchants who are gouging the public because the public has been willing to pay the price. There are, however, natural economic laws which in due time regulate these things. If prices are too high, people will after awhile quit buying, whether it be pins and needles or cotton goods or lumber or anything else. This would bring about a natural readjustment, which would gradually bring things to a more normal condition instead of forcing this readjustment by unwise and premature bank action.

The first thing all bankers and all others should do is to bring about a refunding of all Government bonds for a long term of years at a fair rate of interest, in order to save 20,000,000 investors from losing on their bonds and, worse than that, from losing faith in the integrity of their Government. The next thing is to bring about a change in our income-tax laws which does not encourage profiteering and stimulate high prices. In the meantime, the bankers should help the country to keep its business prosperity, that all the people may find an abundance of work at profitable wages.

THE PROSPERITY OF SOUTHERN COTTON MILLS ALMOST MATCHES THE AMAZING PROSPERITY OF ENGLISH MILLS AND STOCK VALUES ARE ADJUSTING THEMSELVES TO THE WORLD'S ECONOMIC CONDITION.

A SAFE estimate, it is believed by conservative authorities, of the increase in the value of Southern cotton mill stocks within the last 12 months is that on the average they have at least doubled in market value, thus doubling the entire investment in Southern mills. In many cases mill stocks have trebled in value, and during the last three years some have done even better. But taking all mill stocks, the estimates of well-informed men is that measuring the value of these properties by the market value of stocks, the entire industry has more than doubled in 12 months. This is based in part on the splendid earnings that have been made. But another feature of great importance is the fact that the demand for textile machinery so far exceeds the producing capacity of machinery plants that many new mills which have been projected for construction as promptly as material and equipment can be had have been unable to secure promised deliveries of machinery until 1923.

A dispatch to the *MANUFACTURERS RECORD* from Mr. Wade H. Harris, editor of the *Charlotte Observer*, whose special article in this issue on cotton mill development is of world-wide interest, in referring to the great increase in the value of cotton mill stocks, says: "It must be borne in mind that new mills projected have placed contracts for machinery as a general thing for delivery in 1923."

This inability of textile machinery people to make prompt deliveries within 12 months even is a fulfillment of statements made at the World's Cotton Conference in New Orleans, when it was shown that if the world should build the mills that are needed to take care of the world's increasing cotton trade, all the textile-making plants of the world would

have to be crowded to their utmost capacity for the next 12 or 15 years. It is largely because present mills and the projectors of new mills are unable to make an increase in the number of spindles and looms within the next year or two that there has been given an added value to existing cotton mills.

The tremendous increase in mill stocks shown in the article by Mr. Harris is, therefore, due, in part, to abounding prosperity of the past few years, to the outlook for continued activity, and to the inability to increase mill capacity to any large extent inside of two or three years, and likewise to the fact that mill stock values are, in part, adjusting themselves to the cutting in two of the value of the dollar. All of these factors have contributed toward an inevitable increase in mill stocks.

The cotton mill industry in this country and abroad is the only one, we believe, in which stock values have thus adjusted themselves to the new conditions of world-wide inflation. This inflation has been so great that the value of the dollar has been cut in half, and even to a greater extent, and there is, therefore, a full economic justification for an increase in profits which would meet new conditions.

The man whose income might have been, say \$10,000, from a former 6 per cent investment in a cotton mill or other property is very seriously handicapped now if his income has not increased to some extent in proportion to the doubling in the cost of living. Earnings on all the invested capital of the country, whether in farms, in mills, in furnaces, in mercantile business, are justified from every economic standpoint on a basis of at least double the amount earned in former years, for otherwise the farmer, the merchant, the manufacturer or the investor in any of these properties would have nothing to offset the vast increase in the cost of living.

Not all industries are able to do this. The greatest investment in the country, that of about \$20,000,000,000 in railroads, has been almost cut in half by the decline in railroad securities, whereas, based on economic conditions and the cost of replacing the railroads, their values should have doubled. Holders of railroad securities, like the man or woman dependent on a small fixed income from investments, or the teacher or the preacher whose salaries have not been advanced, are the greatest sufferers in the country. The adjustment of their income to their pressing needs is one of the problems of the hour.

The story about the cotton mill development of the South and the rush of New England money into the purchase of Southern mill securities, published in this issue, shows some of the marvelous prosperity which exists in the cotton mill industry and which is spreading to all lines of activity throughout the South.

A GEORGIA LAWYER WHO HAS CHANGED HIS VIEWS ON LEAGUE OF NATIONS.

Rome, Ga.

Editor Manufacturers Record:

Your position on League of Nations sound. When I was blowing off about it I was not aware of the extent that the President of these United States had gone. It is preposterous.

WRIGHT WILLINGHAM.

Mr. Willingham, long a leading man of Rome, is a type of thousands who were swept off their feet by Mr. Wilson's plea that the League of Nations would stop war. The longer this covenant is discussed the more the American people are awakening to the fearful dangers involved.

Never was there a more absurd idea advanced than that the League as formulated would prevent war, and how any thoughtful American could have been willing to sell the very soul of this country for a wholly imaginary benefit to the world we have never been able to comprehend.

The World Entering Upon a Period of Expansion and Wealth Creation of Almost Limitless Extent.

OUTSIDE of Russia there is no part of Europe which suffered worse from the disasters of war than the South during 1861 and 1865, and the ten-year period of Reconstruction following.

No European country lost so heavily relatively as the South.

No European country had to repudiate every dollar of indebtedness incurred for the war as the South had to do, as one of the terms of admission into the Union.

No European country was so thoroughly drained of its livestock and its food-producing abilities as was the South.

No European country on the day of the armistice was in so chaotic a condition from any standpoint as was the South in 1865.

Moreover, the Reconstruction period from 1865 to 1876 was to many of the Southern States more damning in its effect than the war itself.

Poverty beyond the power of words to express, a disorganization of its labor system and of all governmental work far greater than in any part of Europe outside of Russia was the unhappy condition of the South.

For four years it had met overwhelming odds financially and physically. The Allies and America combined did not bring against Germany a preponderating financial and physical force relatively as great as the Union brought against the Confederacy.

When Germany, the cowardly, cringing, whimpering bully that it was, sought an armistice, no part of its country had been damaged; there had been no destruction of farms and factories; its whole governmental machinery was in full operation, with a few so-called revolutions which were largely dominated by the military machine for its own ends and to camouflage the world's attention. Germany was then infinitely better off than was the South in 1865 financially, but the German when beaten is a cringing, hypocritical liar, while the people of the South were men and women of honor and backbone.

England, which had carried a tremendous burden in its own gigantic struggle and in financing its Allies, heroic France and Belgium and Italy, which had met the mighty forces of barbarism, still existed as established Governments, still had their banks in operation, many of their industries as going concerns, and they were not one-half so badly off financially or physically as was the South in 1865.

The South did not have to endure the awful horrors inflicted upon the women and children of France and Belgium, but it was drained of its lifeblood, of its food supplies and of its livestock especially to such an extent that it was 40 years after the war before the South had as much livestock as it had in 1860. Its whole financial system was gone, its whole labor organization was gone, and in the place thereof despicable Carpet Baggers worse than the Bolsheviks of today stirred the animosity of the negroes with hatred of the white man with whom they had formerly lived in peace and happiness to such an extent that the races are not yet back to a spirit of harmony equal to that which existed, not by the power of might but by the power of good friendship, between the whites and the blacks before 1860.

It is well to bear in mind these facts in studying the conditions in Europe. At no time has there been a justification for some of the pessimistic portrayal of inevitable chaos in Europe unless America came to the financial rescue.

Germany has no right to be a prosperous country within the next 50 years, but Germany, unless it enters upon another war, will within the next quarter of a century be richer

than it was in 1914, and will have paid off its indebtedness so readily that the pessimism of the financiers of this country and Europe of the present time as to Germany's ability to meet its obligations will then seem just as visionary as the statement that the financiers made in the summer of 1914, that the war would necessarily end within a few months because the bankers of the world would not permit its continuance. Bankers have always had a great habit of looking and thinking from the narrow viewpoint of the dollar mark alone and not taking into account the mighty forces at work in the world infinitely greater than the power of the bankers. Mr. Vanderlip and Sir George Paish are fine illustrations of the pessimism of bankers. Their tale of woe and of bankruptcy and eternal ruin would be laughable if not so serious.

England instead of being bankrupt is beginning to throb with industrial and commercial activity. The decline in British exchange is making the people of England economical in the purchase of foreign goods and at the same time giving them a tremendous stimulus to produce at home and to export in competition with the rest of the world. This export trade is fairly leaping ahead. Their cotton mills, the greatest single industry of the British Empire, are making fabulous profits, far beyond the wildest dreams of the past. Indeed some mill men are actually ashamed of their profits. And England, instead of losing its power as the financial center of the world will probably re-establish itself more strongly than ever as the world dominant financial power.

France and Italy are already busily at work. They have many problems, but they are not one-tenth as great as those which the South met and mastered.

Belgium is sending forth a story about its own business revival which reads like a romance. Mr. D. L. Blount, former director-general of the Central Information Office of the Division of Economic Affairs of the Belgian Government, has recently issued a pamphlet in connection with the placing of Belgian securities in America, in which from his official knowledge he tells a story of Belgium's reviving prosperity that more than fulfills all that the MANUFACTURERS RECORD has predicted about the quick revival and the tremendous expansion of European activities. He shows that comparing the first 10 months of 1919 with the corresponding period of 1913, the actual resumption of Belgian industries is on the basis of 94 per cent for coal mining, 100 per cent for sugar refining, 75 per cent of cotton spindles are in operation, 60 per cent of cotton looms, 75 per cent of wool products, 70 per cent of shoes, 34 per cent of window glass, and 36 per cent of plate-glass. In 1913 Belgium had 54 blast furnaces in operation. Of the blast furnaces destroyed by the Germans, 18 had been rebuilt by October, 1919, and it is estimated that 25 would be ready for operation by December 31 last, or nearly one-half of the total number which were in operation before the war. The railroads of Belgium are being rapidly rebuilt. The agricultural interests are reviving. Foreign commerce is rapidly resuming its former magnitude, and the labor conditions are in every respect reported as in good shape. Belgian laborers are working hard and faithfully. They were not paid the high war wages for munition work as in America and the Allied countries and, therefore, they are continuing to work on a scale of wages which is ridiculously low as compared with the rates paid in America because they did not have their ideas lifted to tremendous heights as in this country where we paid exorbitant wages for inefficient work. The harbor work is being aggressively pushed, and in Ghent, for instance, the already commodious harbor is being expanded and deepened, large warehouses are

being built and many miles of railroad track are being laid to connect these warehouses with trunk lines going to France, Holland, Alsace, Austria and Italy. It is planned to make Ghent the world's center for the handling and storage of cotton, with the idea of having buyers from all parts of Europe come to Ghent for their supplies of this staple.

What Belgium is doing as so interestingly told in the pamphlet issued by Mr. Blount will be matched in Italy and France and England.

From Germany come reports of a revival there based on the readiness of the laboring people to work long hours and at low wages, and with intensive efficiency in order to bring Germany back to its former power in the world.

Russia may for awhile suffer from the autocratic curse of Bolshevism and the resulting chaos. Serbia and some of the Baltic States and perhaps Poland and Armenia will be held back for awhile, but so great is the power of the mentally quickened activities of the world through the tremendous stimulation of the world's mentality by the forces of war that Europe will be able to completely redeem itself from poverty to abounding prosperity within less than half the time through which the South had to struggle in poverty.

The South's banking system was gone, all of the indebtedness incurred for war was swept out, all of the vast capital invested in slavery as other people have invested in factories and railroads was destroyed, and though the labor itself was left there, the chaotic condition of labor made its very presence a hindrance to development.

As the South was many times worse off in 1865 than was Europe when the armistice was signed, and as the world has made phenomenal progress in science and art and industry and has accumulated enormous wealth in the last fifty years, so the difficulties which Europe will face in rebuilding its industries and its wealth will be nothing like one-half so great as the South faced.

Indeed, it is safe to say, and we believe it is susceptible of proof, that Europe will not labor under one-tenth the disadvantages which hampered the South in rebuilding its fortunes.

Away, then, with any whining wail of bankruptcy and chaos in Europe. Help Europe, we must, whenever starving men and women and children are to be found; help them by dividing to some extent our food supply with them; help them whenever money can be safely loaned and credit safely given, on the only basis which Europe should desire, viz., that of mutual co-operation and mutual profit.

Europe is not a pauper and every man who undertakes to pauperize the thought of Europe by creating the impression that Europe will go into dissolution financially and commercially unless upheld by the power of American finance knows little about the tremendous possibilities in human energy in co-operation with the incomprehensible forces of science and industrial potentialities.

Since the foregoing was written there has appeared in the Wall Street Journal an exceedingly illuminating article on the same subject by Mr. Guy Morrison Walker, a lawyer and financier of New York, in direct line with the ideas expressed in this editorial, except that Mr. Walker does not deal with the South. Taking up the history of the last hundred years, he shows the amazing wealth which has been developed in every country following war. This merely carries out the old thought so often advanced in the past that the tremendous mental stimulation given by war stirs the activities of a people to so great an extent and brings forth so many new and labor-saving appliances that wealth increases at an enormous rate, and so makes up for the material wastage of war.

Mr. Walker takes up in detail the vast growth of wealth in the various countries of the world during the last hundred years following the world's greatest wars. This was true of

Great Britain after the Napoleonic Wars and likewise of France after the same wars. It was true of the German Empire after its wars, and likewise true of France after the Franco-Prussian War and of the United States after the Civil War. After reviewing these facts, Mr. Walker makes the following amazing statement:

"There is not a country of Europe now complaining of its war debt that has not increased its wealth during the war in a sum greater than the debt which she now carries as a result of the war."

Elsewhere he says:

"We are, therefore, on the eve of a period of intensive development of the rest of the world which will certainly continue for the next fifty years. Europe, Asia, Africa and South America will follow each other in an effort to equal or surpass the intensive development of our country by our people. This will produce such an appreciation of values and such an enormous increase in the incomes of the peoples of the earth as will force a reconstruction of all previous ideas of what is wealth and what is an ordinary competency. * * *

"Look at the values or wealth of that part of our own country lying west of the Mississippi in 1870 and compare them to the values and wealth and population in that same territory in this year of 1920. The increase is 2500 per cent. This will give a faint conception of the rewards that will come to those who finance the intensive development of those countries. How can men who have seen these things doubt the future? * * *

"Twenty-five years from now the annual income of the German people will be greater than their present war debt; the annual income of the inhabitants of Great Britain will be more than her existing national debt, and the same thing will be true of France and of Italy, while the other countries whose population has in the past lived on an extremely low wage scale will find their wealth and income increased so rapidly that it will not take over ten or fifteen years for their national income to exceed their total war debt.

"Let us have an end of this talk of world bankruptcy."

With the whole position taken by Mr. Walker the MANUFACTURERS RECORD fully agrees. In a different way and without the use of the illuminating figures which he gives, we had already stated the case in almost exactly the way he has done.

FOUR BILLION DOLLARS FOR AUTOS, MOTOR TRUCKS AND ACCESSORIES.

MR. ELLIOTT H. BARNWELL, manager of the cotton and fabric division of the Goodyear Tire Co., estimates that this year's output of tires will be 40,000,000. Mr. Barnwell makes no estimate as to their value, but, putting the average at \$35—probably a low figure—would give a total for tires alone of \$1,400,000,000. With the certainty that the output value of this year's cars and motor trucks will largely exceed last year's, it is safe to estimate that the total outlay for autos, trucks and tires and accessories will this year exceed \$4,000,000,000, or one-fifth as much in one year as the total investment in all the railroads of the country.

These stupendous figures must be studied in all their significance, as they bear on highway building and on all the nation's problems of transportation.

GOOD ADVICE TO FOLLOW.

THE Manufacturers Record would be a valuable acquisition added to the library of every Chamber of Commerce in the United States. It is the greatest exponent of true Americanism published today; it the greatest disseminator of facts and information pertaining to the South of any paper published, giving at all times liberal space to Southern industries and possibilities.—Commercial Club, Yoakum, Tex.

Amazing Cowardice of Congress in the Face of the Worldwide Bolshevik Menace.

WILLIAM T. ELLIS, the war correspondent, relates how he sat one night in the library of the leading citizen of the holy city of Moscow, the citadel of Russian conservatism. That citizen ridiculed the activity of "the swine." He had but one word with which to characterize the pretensions of the Bolsheviks and that was "Impossible!" Moscow, at any rate, would never countenance the vagaries of the revolutionists. Three weeks later, to the music of guns, Mr. Ellis again entered the city. The leading citizen was in chains and a red flag floated over the mansion he had inhabited.

The inability of conservative men to comprehend the mad daring of revolutionists is what makes revolution successful. Ruin breeds in complacency, and there is no safety except in eternal vigilance.

Well may men weep, therefore, when they consider the tragic cowardice of legislators who in Washington last week prostituted their intellectual processes to the exigencies of politics and refused even to permit consideration by the House of legislation devised to put the conspirators within the penalties of the law. So sudden was the transition from strength to weakness, from common sense to sheer stupidity, that it almost seemed as if some gas, so constituted as to dethrone intellect, had been loosed in the corridors of the Capitol.

For months the Department of Justice has been collecting evidence against the revolutionists. It did not have far to look. It unearthed the records of more than 50,000 aliens who were under oath to destroy this Government. And the Department's work was mightily alleviated by information in the possession of the State Department as to the goal of the Moscow Government, its method of financing its agents and every manner of its working. Staid officers of the law, men whose business brought them cheek by jowl with crime, were appalled by the immensity of the conspiracy, as well as by the devilish cunning of it.

Never, not even in the Catalinian conspiracy, which set the precedent for all others of its kind, was such a formidable and convincing mass of evidence made available by a regular Government.

These aliens, for the most part, were members of the Communist party, or similar organizations. It might have been supposed that the hideousness of their guilt was such that no decent citizen would arise to defend them. But they had become so audacious that they actually appealed to the Secretary of Labor, demanding of him a decision to the effect that the preaching of subversion was well within the legal rights of men who had sworn to overthrow legality. The hearings before the Secretary were of momentous importance, and the showing made was in every respect so conclusive against alien emissaries of ruin that Secretary Wilson wasted no time in declaring what all informed persons knew to be the fact, that the Communist party is dedicated and oathbound to overthrow by force the Government of the United States.

We print elsewhere the Secretary's decision in full. Every man who loves his country should read it.

But while at the one end of the capital an executive officer was performing his duty, at the other a group of men with shaking knees were repeating the apostasy of the disciple, and without waiting for the crowing of a cock were loud in their protestations that the anti-sedition bill was not of their making and that they knew it not.

The House bill had been drafted at the suggestion of the Department of Justice. It had been considered with extreme care by the Judiciary Committee. No penalty was in it for any man who had not the ruin of this Government in his heart. It was a bill which represented the calm and deliber-

ate judgment of both Republicans and Democrats. Also, the Senate, after long debate, had passed a sedition bill of its own.

But when the Judiciary Committee applied to the Rules Committee for permission to have the bill considered, the latter committee was told emphatically by Mr. Gompers that union labor would not tolerate it. An order from the President of the United States would not have been obeyed with more alacrity. Moreover, certain professional farmer advocates in Washington sent along their threats to the Republican leader; and a group of Congressmen from States where Bolshevism, under the banner of the Non-Partisan League, is rampant, gave notice that anti-sedition legislation would have to be abandoned or they could not be re-elected.

Such a run for cover as then ensued has rarely been witnessed before in our own or any other capital. The joint anti-sedition bill became an orphan over night, and there was none to father it. Even the Attorney-General put on the reverse and declared that neither of the bills represented exactly what he was after.

Maybe not, nor does it make any difference. The issue was not whether a bill should pass. The sole question was whether the House of Representatives should be permitted to consider anti-sedition legislation. A favorable ruling by the Rules Committee would merely have brought the bill before the House. If it had faults they could there have been corrected. But cowardice was playing tag with mawkishness, and under the pretense that the legislation might invade the constitutional rights of some scoundrel the Rules Committee decided that it would be far preferable to risk the entire destruction of the whole Constitution and the structure of Government that it supports.

Why is the Federation of Labor so solicitous in behalf of traitors and seditionists? The key may be found, we more than suspect, in a letter from Marsden G. Scott, president of the International Typographical Union, read at the convention of the Union Printers' League of New Jersey, as reported in the press: "It is stupid to deny the fact," wrote Mr. Scott, "that vicious alien propaganda has obtained a foothold in American trade unionism. There is more than a coincidence in the disclosures that show some of the same traitorous influences which sought to handicap our Government during the war are today cooperating to disrupt the American trades-union movement."

Mr. Scott went further. As if he had taken even his words almost bodily from the MANUFACTURERS RECORD, he declared: "The man or men who unnecessarily bring hunger and privation into the homes of workmen is a criminal and a coward by every moral law, a social leper and a menace to our country. It is unthinkable that American wage-earners will now accept propaganda that includes the precepts of the radical leaders of foreign lands, where murder, assassination and every unthinkable brutality is common to every-day existence."

Yet that is just what labor union leaders did do in the steel strike. Moreover, every indication is that Gompers in dealing with the radical "boring from within" is just as great a coward as Congress is in its cringing before him. Apparently the American Federation of Labor does not want any legislation which while purging the nation of assassins would also purge the trade-union movement of the vicious alien element that in it has obtained a foothold.

It is idle to deride the menace of Bolshevism. History records no fanaticism of greater driving power than that which urges Lenin on. Napoleon had no such dreams of conquest as he has. Red cavalry, it is reported, has appeared in Persia and India. Yellow Bolshevik troops will soon be

at the throat of Poland. The whole Orient is a volcano. The menace of the Bolsheviks has become the more serious of Japanese problems. In the field the Bolsheviks have now perhaps the most powerful active armies in existence, held together by magnificent opportunities for loot. In the arena of statesmanship, capital after capital has been corrupted, so much so that the border Baltic States have already amicably compounded with communism, and England has bent its knee.

Bolshevism, child of the worse elements in East and West, has a definite program; civilization has none. Bolshevism is on the offensive; civilization hesitates even to fight back. And to the poor of the world, the lazy, the desolate, the bankrupt, it gives the promise of everything in the alluring slogan "confiscation."

Disease germs may be routed out, but no veins can be purged of Bolshevism while the influx of new poison continues unimpeded.

Of what importance is an election compared to Bolshevism? Suppose that this country itself is so inherently well balanced that it will never accept the Lenin formulas! Is it not true, nevertheless, that civilization looks to us for leadership in the battle against the monster? What will it advantage us if we wake to find ourselves an island on whose every shore the waves of Bolshevism lash? Once let the surging elements of Europe get it into their heads that America is afraid to tackle Bolshevism even within her own borders, that America is bartering with it, and it does not require much imagination to foresee the Russian economic typhus epidemic even along the English Channel.

This Bolshevism is not haphazard—a creature of the war. Deliberately it was planned by intellectualists before the war began. Russia is but an incident in it, the immediate vehicle for the achievement of an end; and that end is not alone the overthrow of society as it is organized, but also of religion and the whole system of ethics now in vogue. Moreover, it contemplates a deliberate world tyranny. There is nothing democratic about it. Only a few even of the Bolsheviks know what the real Bolshevik aim is; it feeds its proselytes now only the pap it knows they like.

It will not do any longer for men who love their country to be silent. They must speak out. They must show Congress that there is a voice more powerful than the union labor lobby—the voice of America demanding protection. Unpreparedness! Pacifism! Refusal to look facts in the face! Have they not already cost us in blood and treasure an incalculable sacrifice? The nation has learned to hate the words. They are Carthaginian, not Roman, in origin. Preparedness against Bolshevism is the first essential, then ruthless extermination of it in this country. That is the local problem, but the menace itself is worldwide, and to its eradication from the world our statesmanship must devote itself.

When will Congress wake up and authorize a proper defence of the country?

WORLD-WIDE DEMAND FOR A SOUTHERN FOOD PRODUCT.

THE food value of cottonseed is now receiving world-wide recognition. Not so many years ago the seed of cotton was considered a nuisance by most cotton growers, and it was not even generally utilized as a fertilizer, for which its potash content gives it a really great value. Following the development of a vast industry in the manufacture of cottonseed oil, cottonseed cake and meal, processes were introduced for the manufacture of cottonseed flour, from which most excellent bread, cakes, etc., are now made.

The most notable development along this line is the work of a Texas miller, Mr. G. A. Baumgarten, who for many years

carried on experimentation at the Schulenburg (Tex.) oil mill, of which he is proprietor. Some years ago he succeeded in perfecting a process for the manufacture of a flour from cottonseed, to which he gave the name of Allison flour. By a process of his own, Mr. Baumgarten utilizes the high protein value of the cottonseed, and at the same time produces a flour that is workable and altogether adapted to bread-making purposes. During the world war the MANUFACTURERS RECORD called attention to the excellence of this substitute for the flour of wheat, then in such great demand for feeding the soldiers of this country and of the Allied nations, and the articles published by us then have had a part in calling the attention of the world generally to the healthfulness and excellence of this cottonseed flour. Recently, in sending in his renewal subscription to the MANUFACTURERS RECORD, Mr. Baumgarten wrote:

"The export demand for my Allison flour has exceeded the supply the past six months by at least 10,000 tons. On December 24 I shipped a 100,000-pound car to London, England, and they all want more of this flour, and you cannot blame them for wanting a food which contains over 50 per cent of its weight pure protein, which is about six times more than wheat flour contains. I have devoted the best years of my life to the oil-mill industry and the past 14 years to this flour, and I am now meeting with success, and the flour is becoming known all over the world through missionary work I have done from year to year, and some of the fine articles you published in your paper helped bring this flour before the world."

WHO IS RIGHT?

TO prevent the recurrence of wars with their long train of evils men of thought and vision have sought to join the nations of the earth together in a peaceful, friendly alliance.

In his efforts to bring about this "consummation so devoutly to be wished," the head of his nation has worn himself sick in soul, body and mind, and from the MANUFACTURERS RECORD and the hands of the men it is upholding he has received no word of commendation; but, on the contrary, the cry has gone forth, as it did on another memorable occasion against one whose mission was to bring peace to the world:

"Crucify him! Crucify him!"

Peace and plenty shall reign only when wars shall cease.

It is not too much to say that a League of Nations is the hope of the world.

In this commendable movement the MANUFACTURERS RECORD should lend its aid.

If it does, when the final day shall come it will hear the welcoming words: "Well done, good and faithful servant"; if not, it will hear ringing in its ears the just condemnation of a just and righteous God.—Ocala (Fla.) Banner.

To what blasphemy will men descend in their blind rage to advocate the League of Nations when so good a man as the editor of the Ocala Banner attempts to put any human being alongside of the Son of God by using the words which apply only to Him—"Crucify Him, crucify Him!" Moreover, has the editor of the Banner ever read the 34th verse of the 10th chapter of Matthew, in which Christ said: "Think not that I am come to send peace on earth," and yet he says Christ came to bring peace to the world. Who is right, Christ or the editor of the Banner?

The angel choir over the plains of Judea sang:

"Peace on earth to men of good will."

The MANUFACTURERS RECORD stands on Daniel Webster's platform when he said:

"I mean to stand upon the Constitution. I need no other platform. The ends I aim at shall be my country's, my God's and truth's."

And standing on that platform, and voicing the truth as God has given him the power to see the truth, the writer has no fear of the judgment day on his League of Nations fight.

The Banner says "it is not too much to say that a League of Nations is the hope of the world." If that were true, then the world's hope would have a bottomless quicksand for its foundation.

More Than Half the Country United to Secure Justice for Southern Ports.

MR DANIEL WILLARD, on behalf of trunk lines serving North Atlantic ports, has served notice that the Interstate Commerce Commission, upon the return of the railroads to their owners, will be asked to cancel the recent export rates granted to Gulf and South Atlantic ports; which means to re-establish the discriminatory rates which heretofore have compelled the outgoing traffic of the country to move through a funnel, of which New York is the small end.

The technique of rate making is a study by itself. Certain discriminations, long practised and tenaciously adhered to, have been acquiesced in for so many years that the attempt to restore equity and fairness very naturally breeds a sincere antagonism in those who have been the recipients of the special favor. Opposition to equality of opportunity for the Southern ports is not, therefore, unexpected, and it may be pardoned; but the one thing that could not be pardoned or condoned would be the re-enslavement of the Southern ports and of the great Midwest traffic territory by the re-establishment of the iniquitous, ruinous and utterly unjustified discrimination which has for years built up New York at the expense not only of the Southern ports, but likewise of all other ports in the United States.

In 1918 the great trunk lines serving the North Atlantic ports failed to earn their Government guarantees in the sum of about \$200,000,000; in the same period the lines serving Southern ports earned a surplus of \$12,000,000. So ran the testimony at the hearing before the Railroad Administration in July. There is a reason for this, and it is congestion. Of all the scandals connected with the war, none, we believe, approached in its tragic meaning and results the lamentable, stupid and persistent attempt to supply the American army in France, and our Allies, through New York harbor. For miles out of New York the congestion was so great that words could not describe it. All sorts of devices were resorted to, including embargoes, but without success; yet never once was there a willingness on the part of New York to permit some of the business to go elsewhere. At times there were literally miles of cars almost alongside empty Philadelphia docks, but some mysterious influence prevented those cars from being unloaded in Philadelphia and stopped ships from going to Philadelphia. The facilities of other ports lay idle and unused for months, while New York wilted under the load. Not only that, but the terminal expenses in New York are the highest in the country, the barge service in cases eating up almost all the profit from the overland haul. Yet the New York mania has persisted, and no attempt can ever be made in this country to ship goods through natural channels but that New York, through her financial or other influence, does not try to block it. Not the South Atlantic and Gulf ports alone, but Philadelphia, and Baltimore, and Norfolk have also known at times what the New York fad meant.

How monstrous the discrimination against Southern ports has been it would take a volume to relate. For instance, three loaded freight cars leave the South for every one that enters. That is a terrific burden on any section. Roads are not going to send their cars into territory where they get but the one-way haul. But so decisive have been the preferential rates in favor of New York that it has been impossible for exports to move via Southern ports. It was pointed out that in order to build up the southbound traffic it would pay the Railroad Administration if it got only half rates for shipments so moving. "Empties" cost money.

Russia spent billions in money and millions in lives to obtain a warm-water port. This nation fifty years ago abandoned its warm-water ports. True New York harbor is

not ice-bound, but the roads entering New York are often subjected to serious delays by snow and ice. There are no such barriers in the South. In time of loading and discharging cargo there is a saving which would more than equalize any excess mileage haul to the South.

The nation's traffic has become too big for one port. It is a physical impossibility to handle all the ships which the Government is operating out of the port of New York. The terminal burden has to be distributed, and, by the grace of Providence, there are plenty of ports to which to distribute it. But, as a matter of fact, last July, the figures of the Shipping Board showed that 75.7 per cent of the Board's tonnage was allocated to New York. Newport News had 8.7 per cent; the Pacific Coast, 7 per cent, and the South Atlantic and Gulf ports combined 8.6 per cent.

Why was it profitable to the Shipping Board, it might be asked, to show such great partiality for New York? Consider the rates to Latin-America!

From New York to Havana the distance is 1186 miles. From Charleston, 646 miles, 45 per cent less; from Mobile to Havana, 553 miles, 53.4 per cent less. But exactly the same ocean rates prevail between New York and Havana as between either Charleston or Mobile and Havana. From New York to Vera Cruz the distance is 2070 miles; from Charleston to Vera Cruz the distance is 1455 miles, or 29.7 per cent nearer. From New Orleans to Vera Cruz is 789 miles, almost 61 per cent nearer than New York. *But the ocean rates are the same.* That is why New York has become a congested funnel. No wonder that Senator Randall exclaims: "The idea of freight being compelled to pay the same from Pensacola, Mobile or New Orleans to Havana, and Cuban destination, as from New York to Havana, is so unfair that the spirit of American fairplay will never, never consent to it when it is once called to the attention of the American people."

Doubtless Mr. Willard and the trunk lines for which he speaks are not responsible in any way for this absurd rate-making which has enabled them to haul for shipment at New York great quantities of goods for Cuba and elsewhere that could have been sent by Southern ports at a savings of hundreds of miles of carriage, but is it not remarkable that these trunk lines, the recipients indirectly of so indefensible a rate-making scheme, should have the hardihood to come into court and complain against export rates via Southern ports which are not discriminatory in any way, but merely eliminate discrimination against them which formerly existed?

Nor is it true that there is an inequality of overland haul which argues against the rates given to the Southern ports. From Chicago to New York by the Pennsylvania lines is 915 miles; to New Orleans it is 929 miles by the Illinois Central, while the slight difference is more than made up by the greater ease of handling in New Orleans. One route from Chicago to Savannah is 1004 miles. But from Chicago to Boston is 1137 miles. Yet Boston takes the same import and export rates as New York. Is it discrimination in favor of Savannah to give it a rate equal to that of Boston for the shorter haul?

The truth is that the allocation of ships to Southern ports and the granting of fair rates, combined with the earnest desire of the Midwest to use the most economical and natural routes of shipment threatens to bring about the very thing which the nation ought most emphatically to desire—a distribution of its foreign trade through a number of ports. This does not threaten the financial integrity of the Eastern trunk lines, which will continue to have more business through New York than they can properly handle, but they seem to resent

the impending readjustment just the same. There are those, indeed, who suspect that the campaign to prevent the construction of the authorized naval dock at Charleston is inspired by a determination to prevent the development of adequate facilities in the South and artificially perpetuate the dominance of New York.

We view with apprehension political alliances for economic aims where the purposes in view are obviously selfish. But when 22 States find their prosperity imperiled by a purely arbitrary system of rate-making and are bluntly informed that the relief they have been able to obtain they will not be permitted to retain, then it is time for such conferences as took place in Washington Tuesday night when representatives from that great territory of the Mississippi Valley, speaking for the people of 22 whole States and parts of four others, not counting the South Atlantic States, comprising more than half of the population of the Union and 53 per cent of its voting strength, issued their ultimatum to the effect that they are going to ship their goods to foreign countries through the ports that can serve them best.

There was no bluff in that ultimatum. It was not an hysterical outburst. It was simply the statement of a calm, deliberate decision, reached after months and even years of consideration. If, therefore, the Interstate Commerce Commission now has the authority or is likely to re-establish the artificial differential enjoyed by New York, Congress will, as Congress ought, provide against the possibility of such a result by the inclusion in the impending railroad bill of a proper inhibitory provision, to be effective not in the case of Southern ports only, but also of any ports similarly threatened by the intricacies of rate-making.

PROSPECTS OF CONTINUED STEEL DEMAND.

THE demand for steel during the 15 months elapsed since the armistice has furnished a surprise, not so much from its volume as from its distribution. There has been a much heavier demand for common everyday consumption than had been thought possible.

At about the time of the armistice the common theory was that inasmuch as in normally active times one-half or more than one-half the steel made passes into permanent use as construction material, there could not be anything like a good demand for steel until the country should get on a stable basis whereby construction works on a large scale could be undertaken. That time has not yet been reached, and yet there has been a relatively heavy demand for steel. The production in 1919 was about 68 per cent of capacity or about 10 per cent more than the production in either 1912 or 1913, the two best years before the war, productive capacity having increased 40 per cent since January 1, 1915, and somewhat more than that since January 1, 1912. Of late there has been an extremely heavy demand for steel, with fancy prices paid for small lots for early delivery. Neither in the production of 1919 nor in the demand in recent weeks has there been represented any large proportion of construction work. Practically no skeleton steel office and hotel buildings have been erected, and few are in immediate contemplation, and the same is true of railroad construction generally.

Nevertheless there has been this steel demand, and it has come in much larger tonnages than had been thought possible from the common everyday consumers, from tool and machinery builders, from automobile factories and from farmers. It is true there has been a very heavy demand from the oil industry, which is not common everyday consumption, but on the other hand it is not construction as the term is generally understood.

Demand for steel has been increasing continually in the past few weeks, and yet even now there is not much construction work represented. Railroad demand has not been in evidence

at all, except that rails have been ordered or reserved to an extent nearly equal to the year's requirements, and considerable tonnage of car repair material have been bought.

While there is a hesitancy to undertake large construction work, requiring much steel, such as skyscraper office buildings and large hotels, there is much activity, present and prospective, in the matter of large and small apartment-houses, which involve little steel in proportion to their total cost, and a great deal of activity, with much more in prospect, in building "community garages" or rows of small garages to rent to individuals, which involve scarcely any steel construction. There is no great prospect of heavy railroad buying in the next few months, rails being already well taken care of, and at any rate railroad buying has not figured either in the demand in 1919 or in the demand of the past few weeks.

It is evident, therefore, in view of the demand that the ordinary everyday requirements of the people are able to absorb much more steel than had been counted upon in that quarter. The steel industry is prospering, in other words, despite the practical absence of some of its best customers. This buying for miscellaneous uses probably represents a banked up demand due to the war. The automobile building program, for instance, was clearly much delayed. Eventually demand along these lines may taper off, but it should be replaced by demand for steel for permanent construction work.

If railroads are developed along practical lines of efficiency their purchases involving steel will probably be heavier in 1921 and 1922 than in the present year. The popular concept of the railroad companies, immediately upon regaining control of their lines, hastening to lay thousands and thousands of miles of new track and buy thousands of locomotives and hundreds of thousands of cars, will probably prove entirely erroneous. At any rate there is no evidence of railroad managers having anything of the sort in contemplation. The development will be along the line of making the railroads more powerful and more efficient, rather than simply bigger. There will be more block signaling to make existing track carry more traffic per day than laying of new track, and more electrification than buying of steam locomotives of old types. When freight cars move an average of 19 miles a day loaded, railroad managers will think more of increasing the travel to 25 or 30 miles than of simply buying unlimited numbers of additional cars, perhaps chiefly to clutter up their tracks.

This railroad development will have to be thought out carefully, and if conditions are made favorable for the railroads the work will be done, spread out over a period of years. This will mean a continued demand for steel, not a sudden rush. In view also of the outlook as to construction work generally the steel industry has in prospect a moderate, perhaps a decidedly large, demand for a period of years, not a great rush for a few months and then a relatively limited demand. Necessarily its prices will have to be reasonable in proportion to its productive costs and the prices ruling for other commodities.

ARRANGE FOR NEXT WINTER'S COAL.

EVERY coal-consuming industry in the country should now make plans to place its contracts in the early spring for shipment during the early summer and fall of as large a proportion of the coal needed as possible. Every ton of coal that can be mined and delivered before next fall should be contracted for within the next month or two. Railroad facilities next winter will be even more congested than now, because, regardless of governmental or private control, it is physically and financially impossible to enlarge their facilities sufficiently to handle next winter's business promptly.

Dangerous Experiment of Supreme Council in Opening Trade With Russia Made at Most Inopportune Time

NOT long ago Litvinoff, the Russian delegate to the Conference at Copenhagen, made a remarkable disclosure which, curiously, has failed to attract the attention that it merited. He affirmed that the Russian peasants did not comprehend sovietism, either in spirit or in practice; that the only thing they cared for was the land.

It was a singular admission for the representative of the Bolshevik government to make, and we may be sure that what he then said was the truth, because it confirms the famous utterance of Tolstol at the time when revolutionary movements were active in Russia after the Russo-Japanese War. He sent forth a circular-letter to the world, correcting the lies that were being assiduously circulated by the enemies of Russia, in which he declared that the peasants had no sympathy with the revolutionists, nor had they the remotest conception of what all the agitation was about.

Litvinoff has told the truth in representing the peasant as concerned only in the land. It was the land that won the simple country folk to the standard of Ivan the Terrible, and enabled that monarch to consolidate his power against the revolutionary element of his day. At that time it was not labor unions, but unions of nobles—landholders—who attempted to control industry and the Government. Ivan offered the actual cultivator of the soil a title to it as the reward of loyalty.

When the small band of revolutionists under Lenine and Trotsky sought to seize the Government after Kerensky had struggled so hard to save his country from suicide, they used the bait of the land to break the allegiance of the peasants to the government of the hour. They announced that the lands were being partitioned, and that every man must go home to get his share; and the armies melted away. The peasants, thinking more of their few acres than of anything else in the world, dropped their rifles and fled precipitately to their native farms.

Despite the successes of the Bolsheviks, which have been made with an army constituting an insignificant fraction of the population—only some 600,000 men, more or less, out of a total population of 180,000,000—the fact that the peasants were out of sympathy with the revolution was most significant. It meant that the revolution of Lenine had failed to carry into effect its prime fundamental principle and was doomed to collapse.

The constitution of this strange governmental experiment, known as the "Republic of the Soviets of Workers, Soldiers and Farmers," says, in Chapter II-A:

"To realize the socialization of the land private property in the land is suppressed; all the lands are declared national property, and are delivered over to the workers, without any form of indemnification, on the basis of equal enjoyment of them by all."

Nationalization, by the succeeding paragraph in the same chapter, was extended to all cattle and to all materials and equipment for cultivating the land. This was striking at precisely the things that the peasants most valued. The idea of ownership, which is all that capitalism means, lies deep and fondly cherished in the Russian peasant's heart. His land, his house, his horses, his cattle, his tools—these he prized; these he has ever been ready to fight for. His devotion to the Czar was founded on the fact that he owed to the "Little Father" his freedom and the opportunity to buy the land on which he lived under a system of long-time mortgages.

When Lenine wanted to break the power of Kerensky he announced that the lands were being subdivided among the poor—all the estates that had not previously been partitioned; now, when he sought to equalize the holdings and to make the

land common property, he fell foul of the peasant's determination to hold fast to what he believed to be his vested rights. The Russian, despite some acquaintance with a sort of tribal communism in his village communities, is in theory and in practice an individualist, and, in his small way, is a devotee of capitalism. This is the great hope that Russia affords for a return to sanity. There is a national spirit here to build upon.

The government of Lenine is a government of the small artisan class, that represents less than 10 per cent of the Russian people. It will be interesting to see whether the experiment of the Allies in permitting a resumption of commercial relations with Russia will expose the weakness of the Soviet republic, as is asserted, and hasten a return to a government safeguarded by law and courts of justice. It seems certain that the system created by the Bolsheviks was destined to collapse as soon as the next planting season arrived, for the peasants would have defied the Soviets. With the opportunities afforded through foreign commerce to entrench themselves more strongly through exploiting the peasant and becoming his master, while leaving him in actual possession of his lands, the Bolshevik government is likely to pass into a new phase of class supremacy, the union-labor class as exploiter of the rest, filled with ardor to extend their system and their influence to other countries, which they will have fresh opportunities to do by the weakening of the blockade.

It may not be generally known that, by the constitution written by Lenine, the army is to be recruited only from the union-labor class, and that "all the other elements of the population are subject to this military organization" (Sec. II, Par. 19), and that the worker or union-labor class, through the Soviets, "may deprive individuals or groups of their rights when used to the prejudice of the interests of the social revolution," and the Soviet is the sole judge as to guilt of the accused. Finally, all men who employ others to gain a profit by their labor are disqualified as citizens and have no civic rights, but are subject to the Soviets and to the military organization (Sec. IV, Par. 65), and merchants and brokers are specifically mentioned as being among those thus deprived of the franchise.

Considering that the Lenine constitution recognizes only the legislative and executive branches of government, and that the judiciary is eliminated completely, making everyone dependent upon direct action of the Soviet for judgment as to his rights, it is impossible to see how credit can be established which will enable a foreign trade to be maintained.

It has already been suggested that the Russians will have to buy with gold, in so far as there may exist an adverse balance of trade. The Government has confiscated all the gold in the country, including the treasure of the Church accumulated through the centuries, and is said to have at command no less than \$9,000,000,000, or more than three times as much as exists in the United States.

This gives to Lenine not only all the funds he might need for a long time to come in settling trade balances, but will afford him a tremendous power for carrying his pernicious propaganda into foreign lands, following the avenues that cannot be closed against this when they are opened for commercial intercourse.

The Supreme Council, obedient to the demands of the merchants, has ventured upon a dangerous experiment. They had done better to wait until the next open season had demonstrated the power of the peasants for nullifying the specious reforms of the Bolsheviks gathered about Lenine, drunk with joy in the momentary success of their mad dreams of social equality and the dominance of manual over mental labor.

The League of Nations, "An Autocratic Oligarchy, Dominated by Empires and Kingdoms," Foredoomed to Failure.

WHILE it may be doubted if Senator Lodge, in his informal conferences with Democratic Senators, had at any time any intention whatever of permitting essential modification of the Lodge reservations, which in themselves represent a substantial compromise, nevertheless the intervention of those Senators who feared that Mr. Lodge's well-known anxiety to bring order out of chaos might lead him into commitments which they could not endorse, was not only timely, but it was, in addition, renewed evidence of the fact that the destiny of the country is in safe hands, with the watchmen wide awake.

Mr. Lodge, we think, is too well aware of the private opinions of Senators to be doubtful of the strength of his position. He must make due allowance for political considerations, which appear to be binding in the case of many Senators. Facts hurt, but we are probably not far out of the way when we say that the failure of the treaty was a very distinct relief to some gentlemen whose votes have favored it. That is the impression which those close to the capitol get, and they get it from private talks with Senators. To illustrate, one gentleman who is consistently supporting the President's view thinks privately that the best way out is to ratify the treaty, but at the same time pass a resolution notifying the League of the intention of the United States to retire therefrom two years hence. He apparently wants to get the country into the League for political purposes and out of it for patriotic reasons. There are other men with similar views. The press of partisanship is mighty.

For some reason some elements in the South have chosen to assume that any attack on the treaty is merely a malicious personal assault on the President, and, therefore, on the South. To love party is one thing, but to love party more than country is another, and we more than suspect that certain great newspapers in the South are woefully lacking in the leadership they should exercise solely because of their servile devotion to political machinery. To be for the League simply because it is a creature of Woodrow Wilson's, or because he says it is Democratic policy, is to be a slave. Intellectual integrity is not less important than formal honesty, and there is no integrity of intellect when a proposal fundamentally affecting the life of the nation is only superficially examined and is accepted in toto simply because a Democratic President so desires.

Fortunately, there are Southern men who have refused to be brow-beaten. There is, for instance, Senator Smith of Georgia, who does not conceive it to be necessary that he should carry a ring in his nose. And there is Senator Shields of Tennessee, who has been subjected to some persecution in his own State because he insisted on studying the treaty and deciding for himself whether its acceptance would be wise or ruinous.

Senator Shields very pertinently points out that in his war message of April 2, 1917, President Wilson declared that a concert for peace could never be maintained except "by a partnership of democratic nations," because "intrigue would eat its vitals away; the plottings of inner circles, who could plan what they would and render account to no one, would be a corruption seated at its very heart," but that the League squares not at all with these sound and just pronouncements. What is this thing, he asks, that is called a partnership of democratic nations? "It is, in fact, an autocratic oligarchy dominated by empires and kingdoms, responsible to no one, and imposed upon the world without consultation or consent, and proposing to rule those in and out of the League alike. It is bound by no code of procedure or laws; it establishes a government of men. There is no semblance of democracy or of the principles of government by the consent of the governed

to be found within its four corners. If this is the promised safe place for democracy, God save the Republic!"

That is what Senator Shields said, and from their graves his forebears must have thanked him, for the cherished cemeteries of the South record in uninterrupted line the memory of men who lived and fought and died in defense of principles opposite in every detail from the fabric of government which the League contemplates. We do not refer specifically to the Civil War, although that terrific struggle was in itself a protest against such a construction of the Constitution as the President now desires the country to undertake deliberately by association, not with neighbors of the same blood and ideals, but with the diverse nations of the earth. We referred rather to the sort of democracy preached by the chiefs of public thought in the days when the South dominated the Government—days to which the South is wont to look back longingly and with applause. Imagine Calhoun meekly voting for this League because an Andrew Jackson or somebody else commanded him so to do! What would Lamar of Mississippi have done had the issue been presented to him? Bitter experience should long ago have taught the South to know a wooden horse when it sees one.

We are inexperienced in world politics; Europe is not. Significant are comments in the British Parliament, such as the following, quoted by Senator Shields:

"May I compliment the Prime Minister on the great acumen he showed when he secured Britain as the mandatory of the ex-German colonies, because I believe that before we get on very far with the ex-German colonies the League of Nations will come to an untimely end, as every experiment of that kind has done. The same thing was tried in ancient Greece and failed, and what happened then will happen now. No power will enforce their verdict. The noble lord, the member for Hitchin (Lord R. Cecil), says that public opinion will solve it. He said that it is possible that when we have spent a lot of money and had a few little wars we shall come out with the German ex-colonies to our credit. At present we owe America £1,000,000,000. Let her take over some of the obligations of Russia to ourselves. Let us see some sincerity in these high principles enunciated so freely on the other side of the water."

The intrigue of which President Wilson warned was never a more dominant force than in the deliberations in which he participated in Paris. It has not ended yet. There are elements which still dream that Hercules can be chained.

Consider, to illustrate, the elaborate scheme which has been launched in London whereby a great private British bank has arranged with the Baltic States to establish in each of those States a bank patterned after the Bank of England, a bank of issue which shall control the currencies of each of these States, in return for which the London private bank shall have a monopoly of both timber and flax exports from the States in question for a period of years. It is reported from London that the scheme gives Great Britain a highway into Russia, whereby she can seize the bulk of Russian trade. But the point of real significance is that the whole program is dependent on a "guarantee of the political stability and territorial integrity of the States involved." And with naive frankness it is also stated that while Great Britain alone is anxious to give such a guarantee, its resources are not now of such a character as to warrant the course, but that "the League of Nations will give the warranties."

That simply means that the United States, if she can be drawn into the League, will guarantee British investments in Russian border States, concessions that are almost mandates.

Little by little the significance of League membership begins to unfold itself. Twenty centuries of intrigue, despotism, bad government and trickery have reduced Europe to a morass, politically and psychologically. Instead of achieving recon-

struction by work, that panacea for national ills, the statesmanship of Europe was intent a year ago, and seems to be intent now, on solving all difficulties by pipe-lining American taxes into European treasuries and using the youth of this country as a universal police force. If we had been beaten in a great war and were compelled by force of arms to undertake the ruinous responsibilities our membership in the League would involve, we might in sackcloth and ashes attach our signature to the abdication of independence; but to go into it openly and deliberately, seduced by sophistry, is utterly unthinkable.

As a concession to a morbid idealism, itself an aftermath of war, it may be excusable to ratify the Godless Covenant with the Lodge reservations. But if all efforts at compromise fail, and the stubbornness of the proponents of disaster leads to no ratification whatever, then may the friends of free institutions everywhere rejoice at the bountiful mercy of Providence!

THE EXPLODED "40,000 MILLIONAIRES" LIE.

ONCE more the old story is going the rounds that as a result of the war 40,000 millionaires were created. This is being used by religious papers and Socialistic organs to create the impression that 40,000 millionaires were brought forth wholly as a result of war work and of swindling activities of business men.

The Baltimore Southern Methodist recently had a cover-page editorial in which it denounced these supposed 40,000 millionaires as "murderers in war and robbers in peace," and in the following week it published also on its cover-page a poem by some misguided reader in further denunciation of the 40,000 mythical millionaires.

Some months ago the MANUFACTURERS RECORD published the facts on which this 40,000 millionaire story was foolishly based, and with a view of trying to stop the further spread of a lie which travels much more rapidly than the truth, we repeat here a letter written by the editor of the MANUFACTURERS RECORD to the editor of the Baltimore Southern Methodist. It is as follows:

"I greatly regret to learn from your issues of January 8 and 15 that you have been misled by the utterly absurd statement sent out from Washington that 40,000 millionaires had been created during the war. This report has been so completely disproven that it is greatly to be regretted that the lie still lives, and the harm that is thereby done militates against the welfare of the country.

The foolish estimate that was once sent out from Washington as to the number of millionaires was based on the income tax returns, and whenever a man reported an income of about \$50,000 he was put down as a millionaire. There are many thousands of people in this country who make \$40,000 to \$50,000 a year as salaries, or part salaries and part outside operations, who have no accumulated wealth of any importance whatever. If a minister receives \$5000 a year salary you might just as well say that his wealth was \$100,000 as to say that a man who in one way or another makes \$50,000 a year is worth a million dollars. There are a good many men in this country who get \$40,000 to \$50,000 a year, and most of them are worth every dollar they get, for they are managing vast business enterprises the magnitude of which makes a \$40,000 or \$50,000 salary a very trifling per cent of the loss or the profit made by good or bad management. There are many others who through advance in properties or through speculation or merchandising possibly make \$40,000 or \$50,000 a year, but who spend a very large portion of it, and yet because they report a large income they are foolishly reported as millionaires. No more unwise economic misstatement has found its way into the newspapers of the country in many a long day than this report of millionaires on top of millionaires to the extent of 40,000 having been created by the war.

Every editorial based on that statement and every deduction drawn from it is without a shadow of a foundation. That in a country of 100,000,000 people engaged in the most gigantic opera-

tions in the world's history, with a total value of agricultural and manufactured products running to about \$50,000,000,000 a year, with enormous operations by tens of thousands of people in the stock market, with a full knowledge by millions of people during the last four years that the world inflation which has been going on would double and treble and in many cases quadruple the value of properties they must now be measured in dollars which have been cut in half or even cut to a still greater extent, it would not be surprising if a great many millionaires had been made during the last four years, but to draw the inference from this fact that there has been a vast amount of rottenness which made possible these fortunes is wholly unjust to the country.

There have been profiteers, and there are many of them yet alive. The Government itself was the greatest profiteer of all. It paid fabulous prices for inefficient labor. Only a few weeks ago, and probably the same thing prevails, the Government was paying \$28 to \$29 a day to negroes and white riveters on Government shipyard work. It paid to contractors the entire cost of army camp work and a profit of 10 per cent. This encouraged every dishonest contractor to make his pay-roll as big as possible, because in that way he increased his profits, and the Government was fully aware of everything that was being done. The wild waste of extravagance by which the Government piled unnecessary billions on top of billions to the cost of our war work would of itself have made many millionaires, encouraged by the premium which the Government put on this kind of profiteering work. But it will be unfair from this condition to draw any inference as to the rottenness of the business interests of America, and certainly it is exceedingly misleading to the public to reprint the old exploded story that the war created 40,000 millionaires in America.

"I am taking the liberty of writing you thus freely, knowing full well that it is not your intention in any way whatever to misrepresent the situation."

ANOTHER SCHEME TO TAP THE TILL.

WHILE it is more than doubtful if rejection of the treaty by the Senate will break the heart of the world, there is no doubt whatever that there are plenty of schemes afoot to break the treasury of the United States.

The latest is the suggestion made at the Pan-American Financial Conference that Latin-American countries sell food to Europe in exchange for their own securities held there, the United States to then take these securities for cash. In other words, transfer the Latin-American debt now held in Europe to the United States, and assure European dominance of Latin-American trade at the same time. It is very simple.

But why cannot the Latin-American countries sell their goods directly for their own securities and thus wipe out part of the world debt? That is what the United States has been doing.

The idea is worldwide that Uncle Sam is holding a bag into which anybody but a citizen can dip his hands with impunity. Our reputation for generosity is larger than our resources.

Indispensable to a Minister.

Home Mission Board of the Southern Baptist Convention.

Department of Mountain Missions and Schools.

A. E. Brown,
Superintendent.

Division of Industrial Demonstration.
J. W. Crow,

West Asheville, N. C., January 9.

In a recent issue of the MANUFACTURERS RECORD I noticed a statement that you send the publication to ministers at special rates. Will you please indicate this rate. I consider the MANUFACTURERS RECORD almost indispensable in my work—that of a minister doing religious educational work among the worthy poor in our great Appalachian Highlands.

I do not ask that any special consideration be shown on account of the work which I am doing, but if it is your custom to make special rates to ministers, I shall be glad to accept same in view of the work as indicated above.

Please permit me to thank you for consideration and service during the recent months.

J. W. Crow.

[Where ministers subscribe we are glad to make a reduction of 50 per cent, putting the rate at \$3.25 for a year.—Editor MANUFACTURERS RECORD.]

A Vigorous Denunciation of the Union Cotton Warehouse and Compress Scheme.

Augusta, Ga., January 20.

Editor *Manufacturers Record*:

In the *MANUFACTURERS RECORD* of January 1 Mr. Rufus R. Wilson, president of the Union Cotton Warehouse Organization Corporation, has an article in reference to the plans of the above company to warehouse and finance the South's cotton crop. Also the daily press of the South is being supplied with propaganda calculated to impress the South with the wonderful advantages of this scheme. There is a reason for all this.

Beware of the Greeks bringing gifts!

Beware of bears in sheep's clothing!

This organization corporation is a combination of bears in cotton clothing, organized for the purpose of securing complete control of the South's cotton crop and overcoming the wonderful work accomplished by the American Cotton Association. This organization is trying to camouflage the real interests by having associated with them some Southern men, but the real backers of this scheme are not the men who have the welfare of the cotton producer or the South at heart, but are those interested in the manufacture of cotton and want to buy the raw material as cheap as possible.

Rufus R. Wilson, president of the company, and R. N. Durfee, chairman of the board, are prominent cotton mill men, as well as many others connected with the company. Durfee is a South hater, if we are to judge by his denunciation of the South, and yet he undertakes as chairman of the board such a proposition as this after publicly berating the South as he has done. Yes, there is a reason for these benevolent and kindly disposed gentlemen rallying at this time to the aid of the South.

These cotton mill men have formed a powerful combination to secure control of the warehousing and financing of the cotton crop and with which to overcome the work accomplished by the American Cotton Association. Their idea is that no combination of farmers making the raw material can long stand up against a combination of the manufacturers of that material. This is the real idea behind the movement. They know that if they can handle, warehouse and finance the crop, everything will be "chicken" for them.

However, the promoters are flying under false colors. Why did they not do this before the formation of the American Cotton Association, with their plans to establish local cotton warehouses in each county sufficient to store the cotton produced in that county, to finance this cotton locally and to gradually market the cotton, securing for the farmer the best price possible? They see the handwriting on the wall, and their idea is to combine under one head as many as possible of the warehouses already built and to build others where necessary so as to be able to absolutely dominate the handling, warehousing and financing of the crop. The farmer cannot expect to secure the best price for his product if he allows it to be handled and financed by the people to whom he expects to sell. Would any man claim that these people were capable of acting as agent for the farmer and securing for him the best price for his cotton? Yet these cotton manufacturers are getting control of as many warehouses as possible and trying to make the Southern farmer believe that it is a Godsend to them.

The South will not be deceived. We know from past experience that we cannot expect help from these men. There was a long time that we needed help from them, or rather a fair price for our cotton. Did we get it? No. Now, thank God, we don't need it, don't want it, and won't have it. Every Southern farmer must know just what this combination or organization corporation of cotton bears stand for, so that they will not allow any of their cotton to be handled by them.

These men are determined that the price of cotton shall not stay where it is. Should all conditions be good and the South produce a bumper cotton crop, would this organization help the farmer finance it or would they buy the surplus cotton cheap, using their warehouses to store it, holding it as a hammer over the farmer's head to force down the price of cotton for years? The South cannot afford to let this crowd handle its cotton.

The system the South needs is the one devised by the American Cotton Association. This association is of the South, and has done more for the South and the cotton farmer in dollars and cents than any other thing. Every Southern man should be a member of this association, and feel that he is an actual working part or unit in it. The great object of this association is to protect the

interest of the cotton producer and to improve his condition. Everyone familiar with what they have done and with their future plans for accomplishing the desired results must give them the great credit due them for their work. Should their efforts cease entirely at this time, the South can never fully pay them and their wonderful president, J. S. Wannamaker, for the results obtained.

There is no question as to the South needing more warehouses in which to protect its cotton from the weather and in which to hold it until there is an actual demand for it, selling it gradually throughout the year. The plans of the American Cotton Association are for each county producing cotton to have ample warehouses to accomplish this purpose. These warehouses are to be owned and controlled by local people who are directly interested in cotton bringing a good price. Practically every county in the South is in a position to handle the financing of its cotton without outside help, and what they need is plenty of local warehouses. These warehouses can be bonded under State or Federal law, the contents insured and the receipt for the cotton used as collateral with the local banks for securing credit. However, the South is not now making cotton on credit as it once was, and this is not the factor that it once was. The South needs warehouses, and more warehouses, all owned and controlled by local people. Every community and every farmer making any cotton to amount to anything should have a warehouse in which to store cotton, protecting it from the weather and selling it only as it is needed. The plan of selling the entire crop in a few months is wrong, and is the result of credit farming. The South with plenty of local warehouses will abandon this plan.

The South must realize that there are powerful interests well organized, who want to control the handling and financing of its cotton. These men have in the past made millions by taking from the farmer his cotton at a price really below the cost of production. Common sense and past experience show that the cotton gamblers and bears are not dead. Be not deceived. These men are not dead. They say frankly that there is not going to be any permanent 40-cent cotton. Just wait until they catch the South with a large acreage planted, good weather conditions and a big crop in sight, then these men will bear the market, putting the price down where under the present cost of production conditions will be worse than when cotton sold for 6 cents a pound and the South was begging with the buy-a-bale movement.

Prepare for this! Organize! Join the American Cotton Association! If there is not an organization in your county, help make one. Follow their advice. Build you a cotton warehouse where you can hold your cotton without loss or expense. Don't think that hard times will never come, for they surely will unless the South is prepared to market its cotton gradually as needed throughout the year.

The State of South Carolina has a cotton warehouse law which has proven very successful. Every Southern State should have such a law. South Carolina farmers are this year handling over 100,000 bales of cotton under this law. It is now in its infancy, and in a few years practically all cotton will be handled under this plan. A South Carolina farmer can build him a cotton warehouse on his farm, store his cotton in it, get a bonded warehouse receipt for it in the name and under the Seal of the State of South Carolina. The State Warehouse Commissioner has it insured and graded and looks after selling it if the owner so desires. The receipt for this cotton is a better security at the local bank than a gold dollar.

But to get back to the scheme of the Union Warehouse Organization. Their president says that it cannot be a success without the co-operation of the farmer, but no self-respecting farmer will put a bale of cotton in one of their warehouses when he knows the truth, and the farmers are going to know it. They had just as well put it in the hands of the Hon. Henry Allen, Governor of Kansas. By the way, he must be one of the 40 or 50 others associated with this crowd, and someone ought to make him vice-president of the concern or chairman of the committee to solicit Southern farmers to place their cotton in this concern's warehouses.

No, the South won't stand for this "babe" conceived in the fertile factory fields of Massachusetts, for it is a bear swaddled in cotton clothing. The kid has got the wrong "Popper" and "Mommer," and he will be as hairy as a Grizzly when he drops his baby teeth. The South is going to follow the plan of President Wannamaker of the American Cotton Association, and not the plan of Rufus R. Wilson, president of the United Organized Cotton Bears' Corporation.

C. N. BOWDEN.

English Cotton Industry

By FREDERICK W. TATTERSALL, Manchester.

The past year was a remarkable period in the Lancashire cotton industry. Twelve months ago the Manchester market was feeling the effects of the end of the war and the consequent slump in values. Buyers held aloof in a very determined manner, and the position of affairs at the end of March was such that it was decided to close the spinning mills for a full fortnight at Easter. A little later there was a distinct improvement in demand, and since then an increasing trade has been done at advancing prices.

During the first three months of the year business in piece goods was at a very low ebb, and numerous manufacturers sold scarcely anything at all. Prices fell from week to week, and gradually the depression in weaving districts became more acute than ever. A large amount of machinery had to be stopped for want of orders, and there was considerable unemployment. Early in April China buyers began to take more interest in prices, and during the next few weeks a substantial business was placed with manufacturers. It must be placed on record that China merchants were the first to realize that the time was ripe for increased activity. For a long number of years they have had the reputation of being the best buyers of cotton goods in the world, and undoubtedly their action in the spring of last year was another indication of their commercial sagacity. The buying movement had soon an effect upon prices, and produce steadily hardened in quotation. The change in the outlook brought in exporters to other markets, and since then there has been an increasing trade at advancing rates. Taking the year as a whole, our leading outlet of India was disappointing. Offers from that part of the world lagged behind, and dealers in the bazaars never seem to have caught up with Manchester prices. The failure of buyers and sellers to fix a basis for transactions was partly due to the considerable delay in telegrams to and from the East. During the last few weeks of the year there was a distinct improvement in trade for Calcutta, Bombay, Madras and Karachi, but, of course, buyers had to pay much higher prices than in the summer. The offtake for Egypt and several outlets of the Near East was large. Buyers from week to week purchased freely. Cairo as a distributing center is becoming increasingly important as time goes on, and most people are looking forward to a much bigger trade in the future with the outlets of the Levant. There was an improvement in the turnover for several European countries, especially in fancy materials. For some time now a healthy business has transpired for Central and South America. Shipments to Australia and New Zealand were much smaller than in 1918, but latterly more business has been done for these outlets, and in the near future there should be a distinct improvement in the exports. The home trade at the beginning of the year was considerably affected by the depreciation in the value of stocks. Later on, however, demand revived, and recently buying has been of increasing dimensions. In some quarters there is a fear of a distinct shortage of goods in the spring. Further advances have taken place in the cost of bleaching, printing and dyeing.

The following is a comparative table of cloth quotations during last year:

	32" printers. 116 yds. and 50's.	36" shirtings. 76 yds. and 40's.	38" shirtings. 38 yds. and 19's.	39" shirtings. 18x16, 18x16, 37½ yds. and 16x16, 8¼ lbs.
1919.	s. d.	s. d.	s. d.	s. d.
January 3.....	65 0	62 0	37 6	31 0
February 7.....	50 0	51 6	30 0	26 0
March 4.....	44 0	45 6	26 0	23 0
April 4.....	38 6	38 0	25 0	23 0
May 2.....	41 0	41 0	25 6	24 0
June 6.....	52 0	50 3	31 0	27 0
July 4.....	57 0	55 9	34 0	29 6
August 1.....	62 0	59 0	36 0	32 0
September 5.....	61 0	57 0	35 0	30 0
October 3.....	62 0	58 0	35 0	30 0
November 7.....	62 0	58 0	35 0	30 0
December 5.....	77 0	74 6	43 0	36 0
December 31.....	87 0	80 0	47 0	41 0

The following is a comparative table of cloth shipments for the past seven years:

	Yards.
1913.....	7,075,252,000
1914.....	5,735,744,500
1915.....	4,746,804,600
1916.....	5,254,222,700
1917.....	4,978,237,900
1918.....	3,699,252,300
1919.....	3,528,756,500

At the beginning of the year spinners of yarn were giving out very doleful reports. All producers were feeling very severely the lack of activity as a result of falling prices. The depression during the first three months was very acute. A turn for the better in business came in April and a buying movement covering all counts and qualities was started which has since scarcely been checked. In American qualities for home consumption there was an increasing demand, especially during the latter half of the year. Ring beams were much in favor, and producers steadily extended their engagement. Cop twists also did well, and there is a distinct scarcity of supplies, especially in the superior marks. There was same irregularity in wefts, and this section did not do quite so well as some other departments. With regard to yarns made from Egyptian cotton, the activity was even more pronounced than in the American section. Demand has definitely overtaken supply, and there is a decided shortage of certain counts and qualities. Spinners of yarn as a body have lately derived considerable support from the increasing trade in shipping descriptions. During the war many of our leading outlets were closed, but as reconstruction has taken place in different parts of the world there has been a broadening demand for Lancashire yarns. A big turnover took place for Holland and other countries of Northern Europe. Buyers for Eastern markets were also very active. India bought freely in both single and twofold descriptions. A considerable business was put through for China, and a feature of interest was the trade done for Japan. A healthy demand was met with for the Levant and other Near Eastern markets. Doublers experienced a very busy year, and there was much pressure for deliveries.

The following is a comparative table of raw cotton and yarn quotations:

	Good mid. Amer. d.	32's. Twist. d.	40's. Weft. d.	50's. Weft. d.	F. G. fair Sakel- leridis. d.	60's. Twist. d.
1919.						
January 3.....	22.04	38¾	39½	45	27.30	67
January 7.....	17.97	28½	29	31¼	27.30	59
March 7.....	15.96	27½	27¾	30¾	27.09	52
April 4.....	17.24	26	25½	29	26.59	47
	Fully mid. Amer.					
May 2.....	17.89	29¼	28¾	32½	26.59	48
June 6.....	19.56	37½	35¼	32	27.09	49
July 4.....	20.04	39¾	38¾	42½	27.09	51½
August 1.....	20.48	42¾	42½	46½	31.00	58
September 5.....	18.75	42	40¾	44¾	30.00	61
October 3.....	20.28	42½	41	45	30.00	61
November 7.....	26.20	49¾	47	53¾	37.50	74
December 5.....	26.37	51¼	48½	55	49.00	88
December 31.....	30.75	51	53¼	60	54.00	99

The following is a comparative table of yarn shipments for the past seven years:

	Pounds.
1913.....	210,099,000
1914.....	178,496,500
1915.....	188,178,700
1916.....	172,170,600
1917.....	133,151,300
1918.....	191,711,400
1919.....	162,655,500

Extraordinary activity was experienced during the year in the mill share market. More dealings took place than in any previous 12 months. Prices since March have risen to a striking extent, and, of course, values have been vitally affected by the mill-buying movement. During the past six months a feature of great interest has been the sales of mills, and over 160 concerns have changed hands. According to a list of 62 companies which shows the old paid-up share capital, the total sale price and the paid-up share capital of the new companies. It may be mentioned that the total paid-up share capital of the 62 old companies amounted to £2,670,382, while the total paid-up share capital of the new companies is £8,234,000. It will be necessary in the future for the owners of the mills to make much more money if past dividends are to be maintained.

From a labor point of view, the notable event of the year was the reduction in July of working hours in the spinning mills and weaving sheds from 55½ to 48 per week. At the end of 1918 both spinners and weavers secured a rise of 50 per cent on list rates,

and it was agreed that no further change should take place for six months. In June last important negotiations took place between the trades-union officials and the employers' associations. Owing to disagreement on hours and wages, a strike of three weeks occurred, but a settlement of the dispute was ultimately arranged on the basis of a working week of 48 hours without any further change for 18 months, and wages to be advanced 30 per cent on standard list rates, with no further alteration until after April 30, 1920. Recently there has been some unrest among the workpeople owing to a feeling that they are not participating in the trade boom to the extent which might be expected. Early in December the Federation of Master Cotton Spinners' Associations decided to pay special bonuses to the operatives employed by their members, which in the aggregate will amount to about £1,500,000. No similar action has so far been taken by the employers in the weaving section of the industry, but the matter is now receiving their consideration. It is taken for granted that early in April there will be a demand for a big advance in standard list rates.

The general outlook for the cotton industry of Lancashire was never brighter than at the present time. The year 1918 was a record year for profits, but 1919 was even better. It is probable that in 1920 all previous figures will be beaten. The margin of profit in yarn and cloth is exceedingly wide. Although a large business has been done during the last year, there are no indications of the requirements of our customers being satisfied. Demand still exceeds supply, and producers are quite unable to meet in an adequate manner the wants of buyers. With regard to future prices in the spring, a good deal will depend upon the acreage for raw cotton in the United States. Growers may be stimulated to plant a large area, and there is a possibility of a fall in values. An easier movement in raw cotton rates, however, is not likely to have any immediate effect upon yarn and cloth quotations, as spinners and manufacturers are so deeply sold they can afford to be very independent. A slump in New York and Liverpool would undoubtedly result in buyers of yarn and cloth holding aloof. With reference to consumption of cloth, it may be pointed out that although a big trade has been done during the past nine months, our shipments are a long way behind pre-war days, and the output of Lancashire has been very severely affected by the shorter working week in the factories. Overproduction seems to be a long way off. It is reported that in many of our outlets abroad the imports during the last few months have not been equal to the clearances, so stocks, instead of increasing, are decreasing. Buying during the present year will probably be irregular, but a sound, healthy trade is assured. The higher capitalization of spinning mills may be expected to go on, and it is not unlikely that before the end of 1920 we shall experience a mill-building movement. If the cost of machinery and building materials be reduced, the erection of new mills will be a practicable proposition.

\$4000 from Three Acres of Cabbage Plants.

Mercedes, Tex., January 24.—[Special.]—The sale of cabbage plants from three acres of land has netted H. H. Wetegrove, a farmer of this locality, nearly \$4000 this season. In addition to the revenue that he received from the sale of plants to neighboring farmers, Mr. Wetegrove obtained from the three-acre tract enough plants to "set out" 60 acres of his own.

For several years Mr. Wetegrove has been unusually successful in raising cabbage plants both for his own use and for sale. This season, however, he broke all his past performances and from three acres has sold enough plants for 200 acres.

Early in the fall Mr. Wetegrove purchased 40 pounds of cabbage seed, which he planted on the three-acre tract. Incidentally, this had just yielded a summer crop and had been idle less than a week when the cabbage seed were drilled in. The season has been especially favorable for cabbage-seed beds, and the germination is said by growers never to have been better.

Growers figure that 10,000 cabbage plants are required for each acre. Mr. Wetegrove sold his plants at \$2 a thousand, which, deducting the cost of the seed, left him a profit of \$3820 for his time and trouble in raising the plants. These figures, however, do not take into account the value of the plants for the 60 acres of his own which he has set out, and which, if added to the earning, would give a total of \$5020.

The Southeast Missouri Retail Lumber Dealers' Association will hold its annual meeting March 25-26 at Cape Girardeau, Missouri.

Great Increase in Value of North Carolina Farm Lands—Assessment Method to Be Changed.

Raleigh, N. C., January 21.—[Special.]—The Legislature will meet in adjourned session next July, and the main thing it will take up will be the new assessment of property values, on which the Tax Commission has been at work nine months, and which will then be reported. The assessment heretofore has been at once a farce and a fraud. In 1917 the average value of the farms in Robeson county, easily one of the richest in the State, was only \$5,605,000, yet in 1919 these farms produced 60,000 bales of cotton, this and the seed being worth \$13,000,000! This is for one crop alone. Farmers would not even think of selling their land for six times the assessed value, for in one year the crops brought in over four times the assessed value. The total value of the assessment of the farms in the State was only \$246,377,000, which is not nearly a third of the value of the 1919 crops. The cotton crop of 1919 was big enough in value to buy all the farmland at that valuation. The average assessment for the whole State in 1907 was \$8.75 an acre, while the value of the crops was \$750,000,000! The farms are really worth over \$3,000,000. The census of 1910 gave \$457,000 as the value of farms, this being twice what the assessment of 1917 gave! This shows what a joke the latter assessment was. In 1910 this State was put down as twenty-sixth in the value of its farm products; in 1917 it had advanced to eleventh place, and in 1919 it climbed to fourth place, and is still going strong, in the Iowa-Indiana class.

Director W. C. Crosby, who is the originator of the community service moving-picture work in North Carolina, is now making a moving picture of the rich and very important county of Robeson. He will show old and new farm methods; educational and health work; living conditions, economic, social and physical. These pictures will first be shown to the people of Robeson, and then to those of the ten other counties which have this splendid service, in which North Carolina stands alone in all the United States. It is now to be put on in ten more counties.

There are now in this State 48 plants making cotton oil, with an investment of \$22,000,000 in plants; 27 fertilizer factories making fertilizers from phosphate rock almost entirely; 14 making fertilizers from cottonseed; 6 making oil and fertilizers from fish; 30 tanneries making sole and belt leather almost exclusively; 3 making paper pulp; 20 making sulphuric acid; 25 making tannic acid; 2 making rubber tires; others making soap, dyes, lime and sizing compounds.

Negro Conference Urges Diversified Farming and Increased Livestock Production.

Among the important constructive recommendations of the Twenty-ninth Annual Tuskegee Negro Conference, held recently at Tuskegee, Ala., is the plea for increased livestock production and for diversified agriculture. On this subject the report reads:

"We would also urge our people to continue to profit by the lessons of industry and thrift so effectively taught by war conditions, and to keep up the increased impetus to acquire homes and farms. But we would remind them that, in order to make these farms yield their greatest returns, they must intensify their farming and practice diversification, which in recent years has proved so great a benefit to the South. And especially does this conference urge farmers to grow sufficient food for their families and feed for their stock, and to raise more and better poultry, hogs and cattle. And the rapidly increasing importance of Montgomery, Ala.; Atlanta, Ga., and other places as leading stock markets ought in itself to encourage Southern farmers in growing livestock in greater numbers."

Relative to the need for continued improvement in living conditions among the negroes and the necessity for more modern homes and better educational facilities, the report says:

"This conference also suggests that the greatly increased value of farm products and better wages which colored men are now enjoying should result in better homes and schools and churches. Living conditions must be greatly improved among our people, if they would lay a sure foundation for future progress. And even with better homes, there can be no assured or abiding progress without a decided increase in intelligence among the masses of colored people. The war revealed an appalling amount of ignorance and consequently inefficiency among the negroes of the South. This lesson should not be lost upon us."

Fabulous Wealth in Southern Cotton Mill Stocks

PRICES TREBLED AND QUADRUPLED IN LAST FEW YEARS—NEW ENGLAND INVESTORS POURING MONEY INTO SOUTHERN COTTON MILLS.

By WADE H. HARRIS, Editor Charlotte Observer.

The activity in Southern cotton mill stocks which began to manifest itself during the summer of 1919 is showing no signs of abatement. On the contrary, it is on the increase, being largely influenced by the spirit of speculation, made the more attractive by reason of the fact that there appears to be but little of the element of risk involved, at least for several years. The stocks are held at such high figures and the business back of them is so firmly established that there is room for a considerable amount of possible depreciation in the future, and yet a fine margin of safety in profits is insured. Not only is the activity noticeable in the purchase of individual blocks of stock, but in many cases entire mills are being bought up. An investing public that for a time was content with taking up any small lots of stock that might have been available is now seeking absolute ownership and control of mills as a whole.

It is significant that the majority of new investors are representatives of New England mill interests. New England textile capital has been coming South at a great rate, and it has been seeking the larger plants, as in the case of the Loray, at Gastonia. The recent selling of the Rhodhiss holdings to B. N. Duke marked one of the largest all-home deals consummated since the boom was on. Northern and New England capital is sending in offers for purchase of cotton mill stocks in the South pretty much as a commission merchant would send orders for bills of goods. As for instance, the Observer a few days ago received telegraphic inquiry from a New York factor for controlling interests in a block of North Carolina mills and instruction to close options on such stock as might be secured, regardless of price. He wanted to buy up a string of the largest mills in the State, and wanted to do it by telegraph. The deal he proposed would have involved 10 or 12 million dollars. For choice stock he was quoted prices ranging from \$450 to \$600 a share, but no instructions have come to close the deal.

Another feature of the cotton mill prosperity situation in the South is enlargement of existing plants and building of new mills. Where increase of capacity to material extent is not practicable, the mill owners proceed with construction of a new mill, and in that way the spindleage of the South is being enormously increased. The stock for new mills in in as eager demand as stock in old-established plants, probably because it is more available for purchase, and it is noted that these stocks are rated at about the same figures as old mill stock. The correspondent recently met a Charlotte man who had bought stock in the Green River Mills at par. His holdings were small, about 10 or 12 shares, and he was asked what he would take for it. He declared that his stock was not on the market, but, being pressed to say what he would be willing to take in case he should sell, he replied that he thought he might part with it at \$450 a share. That figure, in fact, appears to be the average price at which cotton mill stock is being offered or held, though there are cases on recent record of stock passing hands at as low as \$350, and in a few cases, not so recently, at \$250.

A good many mills make no quotation for stocks at all, while a number supply regular market information of stock bids and prices asked. There are very few bids below \$200. Two weeks before its sale Rhodhiss stock was held at \$500. About the same time Easy mill stock was quoted at the same figures, but the price asked is subject to fluctuations, and a price that was set last week may this week be raised a few points. There is no record of quotations going down. In fact, stock in the more prosperous mills goes at whatever the owner might set as a figure at which he would sell for. New holders are not disposed to go into speculative operations. They are holding to their stock as a "good investment," and are content to wait the coming of dividends. It was stories of the size of these dividends that gave the mill stock boom its birth and brought it to the front as the favorite Southern investment. It is of record that stock in mills projected and which could not possibly be erected and equipped within a year are being held in some cases as high as \$400 a share, and very little of this new mill stock was sold by the company for less than \$125 and \$150 a share.

While the buying of stock is to some extent speculative, there is but little speculation in the investment itself. There is no fictitious value behind it, for the mills are earning large dividends on established conditions in the market, the chief factor being demand. The signing of the armistice found the cotton mills of the South in fine shape for booking new orders on the basis of a steadily growing demand, and these orders were placed on a scale that insured an abundant business for the mills for months to come. All spindles and looms are assured of activity for a long period in production of goods contracted for months ago, in some cases with existing conditions such that the mill man may book as many new orders as his capacity and ability to fill might justify.

To be sure, it is a situation that cannot last always, but neither mill owners nor people who have bought stock are inclined to give thought at this time to the coming of the day when the tide may turn downward. Confidence that the mills are settled down for a long period of prosperity seems to be universal. This confidence appears to be strongest among the New England men who have been attracted to the Southern opportunity and who take the view that, even when the cotton mill business may show indications of a return to somewhat of a "normal" basis, the advantages of labor, raw material at the door, abundant electric and water power will prove a continuing Southern asset, and that, come what may, the textile industry in the South gives likelihood of proving more profitable than in any other part of the country under any conditions that may develop.

Present profits appear to be more alluring than those being made in the New England mills, conditions appearing to have emphasized the superior advantages that have long obtained in the South, and having brought these advantages to the fore in this practical manner, the boom has done a benefit to the Southern textile industry which will live long after the present flurry in stocks shall have been forgotten. The South has been given a bit of advertising that will prove of tremendous value in the future development of the cotton industry, and, whether the existing boom in stocks shall be long-lived or not, there will be given an impetus to the building and equipment of mills in the cotton belt of the Southern States that will bring this section permanently to the front as the greatest cotton milling territory in the world. The supremacy long boasted by New England will have become a thing of the past. The cotton manufacturing world is being concentrated in the South, and North Carolina, with its abundance of water powers and excellent railroad facilities, is apparently developing into the hub of these activities, for, in selling stock, in enlarging plants and in building new factories, this State seems to be the busiest of all.

The extent to which New England capital is flowing into the Southern textile field is best indicated by the number of investments so far made. The Loray Mills, at Gastonia, represented the first New England deal of importance. The Chadwick-Hoskins, at Charlotte, was a second, and the Osage, at Bessemer City, N. C., a third. Other mills bought by New England capital in recent weeks are the Selma, at Selma, N. C.; the Ossipee and the Hopedale, at Burlington, N. C.; the Pilot, at Raleigh, N. C.; the Lynchburg at Lynchburg, Va.; the Ella, at Shelby, N. C.; the Pelham, at Pelham, Ga.; the Mobile, at Mobile, Ala.; the McComb, at McComb City, Miss., and the Selma, at Selma, Ala.

Other cotton mills that have "sold out" since the boom set in are, in North Carolina: The Neconsett, in Cumberland; Double Shoals, at Double Shoals; Laurel Bluff, Mt. Airy; Rhodhiss, Charlotte; Mountain View, Kings Mountain; Sevier, Kings Mountain; Rhodes (Anderson Mill Co.), Lincolnton; Capelsie, Troy; Atlas, Bessemer City; Atherton, Charlotte; Duke Yarn Mills, Durham; Lloyd Cotton Mills, Mariposa; Monbo Mills, Monbo; Mount Holly Cotton Manufacturing Co. (Alsace), Mount Holly; Rosemary, Roanoke Rapids. Also Pelham, Pelham, S. C.; Clover Cotton Mills, Clover S. C.; Cowpens Manufacturing Co., Cowpens, S. C.; Manchester, Rock Hill, S. C.; Yazoo Mills, Yazoo City, Miss.; Canebrake Mills, Uniontown, Ala.; St. Francis, Helena, Ark.; Winona, Winona, Miss.; Tipton, Covington, Tenn.; Vardrey Mills, Greenville S. C.

Protection for Dye Industries

Agreed on by Senate Committee

[Special Correspondence Manufacturers Record.]

Washington, D. C., January 27.

A bill to establish an American dye industry has been unanimously approved by the Sub-Committee of the Senate Finance Committee to which it was referred for consideration. It comes out of the committee in amended form a feature for the licensing of imports of dyes having been eliminated because of the very strong opposition made by dye consumers.

The dye producers gain, instead of the protection of a license, what amounts to an embargo against the import of dyes which are already manufactured here, and a provision that those which the American producer has not yet made can be imported in quantities only sufficient for the needs of American consumers for a period of six months.

This limitation of imports is the crux of the situation from the dye manufacturers' standpoint. They presented facts to the Senatorial Committee which show that it would be possible for Germany to prevent the development of a dye industry if she were allowed to send this country quantities of these difficult and important dyes sufficient to last the American consumer for a great length of time. Such imports would cut off any possible market for the American manufacturer and he would not continue the difficult and costly work necessary to build up a self-sustaining American dye industry.

It became evident very early in the hearings that there was a strong feeling against regulation of imports by use of licenses, and the dye interests, at the suggestion of the Senatorial Committee, searched some other plan until they struck upon the idea of a selective embargo as it is incorporated in the bill reported by the committee.

The bill as it now stands gives the importing consumer every facility which he has heretofore enjoyed in the purchase of foreign goods, with no additional formality except the filing of an affidavit stating that the goods are intended to fill a real need and that the quantity is not more than six months' supply.

The consumer need only look at the importable and non-importable lists, which are to be prepared by the Tariff Commission, to learn at a glance whether the goods which he needs are available in this country.

The bill in amended form was submitted to the opponents of the licensing measure and was still further amended to meet objections which they made to it.

The Sub-Committee report shows that the Senators were deeply impressed with the importance of this bill from a national standpoint as set forth by the officers of the Army and Navy. The passage of this bill will make it possible for the American producer to build up in a few years an industry which will be able to compete without special protection with the great German monopoly, which for nearly half a century held the dye trade of the world and made it possible for Germany to remain in the war for four bloody years. It has demonstrated during the hearings that every dye plant is a potential arsenal, and that Germany used her dye-plant facilities to the great disadvantage of the rest of the world.

American manufacturers have already invested nearly a hundred million dollars in dye plants, and they made wonderful progress under the protection of the Allied blockade, which kept foreign goods out of this market. The bulk dyes have been produced in such quantities that already 80 per cent of the country's needs are being supplied. The other 20 per cent is made up of dyes which have not yet been developed in a commercial way. Every dye problem it was testified, has been solved from a laboratory standpoint, and there is no doubt in the minds of the American manufacturer that he can, in a few years, if protected from a German dye invasion, develop the industry to a point where it will be fully able to take care of itself.

The bill as it now stands has the approval of Senators without regard to party affiliations. The report shows that it was considered on the broad basis of an American necessity and not from the partisan tariff standpoint. It is expected that it will

be reported out by the full Committee in a few days, and then will be passed by the Senate without delay.

The importance of early action has been emphasized and has been realized by Congress, which passed a joint resolution continuing the powers of the War Trade Board to cover any lapse of time between the ratification of the Peace Treaty and the passage of this protective legislation. This was done just before the holiday recess, and it has been agreed by the leaders of the Senate that if such danger again threatens, the time will be still further extended pending the passage of this dye legislation.

It cuts out the whole requirement of licenses. No man, whether consumer or importer, need ask anyone's leave to import whatever is lawfully importable. No one need go to Washington, "or retain a lawyer." The consumer can get goods as formerly by merely giving an order to an importer, or can import for himself by merely stating that the goods are for his own consumption.

It abolishes the consumer's uncertainty. He can tell by a glance at the importable lists just what he can import and what he cannot.

It abolishes delay. It permits import with no more formalities than at present, except when a product has already been imported in such quantities as to provide for the whole country's needs for half a year, in which case it will presumably be purchasable from those who have already imported it.

It enables the consumer to get any errors which the Tariff Commission may make corrected before any damage is done. If they find that products which they think they may wish to import are not on the importable lists, they can show the Tariff Commission their reasons at once without waiting till they need the goods. Questions of importability can be settled at the outset.

It takes care of the professional importer. He can import without limit in bond, and to get his goods in need only file a sworn statement—no more vexatious than ordinary customs requirements. He is only called on to show a bona-fide order for the goods; and till he had such an order he would not want to take his goods out of bond, anyhow.

It provides against one of the most dangerous German methods of evading tariff or license protective laws—the invention of new names for old products. A new name would in itself keep the goods off the importable list till the Tariff Commission were shown that it represented an actual new product.

It provides, with minimum inconvenience to consumers, against the crucial danger of the importation of cheap substitutes. Any product which has any substantial use except as a substitute must be placed by the Commission on one of the importable lists. The Commission's action in regard to each product is public, general and immediate. There can be no complaint of discrimination as between consumers, and errors can be corrected at the outset. The consumer's own word is taken for the need of the product for his purposes.

\$1,000,000 for Tarrant County Highways.

Fort Worth, Tex., January 24—[Special.]—One million dollars will be expended on building new roads and improving present highways in Tarrant county as soon as funds are available from the sale of this amount of bonds. Bids for the bonds will be opened January 29. County Judge Hugh L. Small has announced that the road work will be started as soon as possible.

Tarrant county voted last summer \$3,450,000 of road bonds. The \$1,000,000 of bonds to be placed on sale is to provide funds for the first unit of road improvement in the county.

New main roads will be built and small branch roads constructed to give the county a comprehensive road system, following the plans of county and Federal engineers. Approximately 150 miles of new road and present routes will be built, resurfaced and repaired.

Eastern Trunk Lines Challenge Use of Southern Ports by Midwest for Export Business

[Special Correspondence Manufacturers Record.]

Washington, D. C., January 26.

Through the Midwest-Gulf-South Atlantic Foreign Trade and Transportation Committee, publicity has been given to a formal letter to the Railroad Administration from Daniel Willard, president of the Baltimore & Ohio Railroad, announcing that the trunk lines serving New York and North Atlantic ports intend to fight the new export freight rates accorded to the South Atlantic and Gulf ports by the Railroad Administration.

The committee is made up of representatives of commercial organizations in Chicago, St. Louis, St. Paul, Detroit, Des Moines, Kansas City, Memphis, New Orleans, Pensacola, Charleston, Brunswick, Cincinnati, Minneapolis, Indianapolis, Omaha, Louisville, Houston, Mobile, Wilmington, Savannah, Jacksonville.

The committee points out that the intention of Mr. Willard, in behalf of all the eastern carriers—the New York Central, Pennsylvania, Baltimore and Ohio, and the Erie, now enjoying the bulk of the export haul through northeastern ports—to lead a fight against the new outlets to the sea from the Middle West and the new trade routes recently established, is an attempt to force the Middle West to limit its shipping to the North Atlantic and to stifle competition on the part of the other ports.

The correspondence in the case follows:

November 26, 1919.

Mr. Geo. B. McGinty,
Secretary, Interstate Commerce Commission,
Washington, D. C.

Dear Sir—I am enclosing herewith, for your information, copy of a letter which I have this date addressed to the Director General of Railroads, with reference to certain rate changes made or to be made.

It is the belief of the Eastern carriers that this proposed change is uneconomic, unfair and unjustified, and it is the present intention of the interested corporations, when the roads are returned to corporate control, to apply to the commission for cancellation of the rates in question in the event they are published by the Administration as now contemplated.

Yours very truly,

(Signed) D. WILLARD,

Chairman, Presidents' Committee, Official Classification Territory.

The Willard-Hines correspondence follows:

Baltimore, Md., November 26, 1919.

Walker D. Hines,
Director General of Railroads,
Washington, D. C.

My Dear Sir—There has been brought to the attention of the railroad corporations in eastern territory the matter of an order issued by the Division of Traffic of the Federal Administration providing for the application of the same rates on traffic for export through the Gulf and other Southern ports, from certain territory east of a line running north and south substantially through the center of Indiana, as are concurrently applied via New York, thus creating a condition which the interested corporations regard as inimical to their interests, and they accordingly desire this letter to be considered a protest against the action indicated.

The system carriers chiefly interested in the matter are the New York Central, Pennsylvania, Baltimore & Ohio and Erie, with others largely so and upon whose behalf this protest is written.

Among other things, the establishment of the rates referred to creates an entirely new situation or condition from any that has heretofore existed. To accomplish the purpose stated will require the movement of a considerable part of the business affected, substantially double the distance that it is from a greater part of the territory involved to New York, Philadelphia or Baltimore. It will work to "short haul" a number of the carriers upon whose lines the business originates and reduce their earning power accordingly. It will have the effect of introducing

such an abnormal rate adjustment in the territory under consideration as to constitute a menace to the rate structure as a whole, 4th Section violations being a prominent feature in the proposed adjustment.

It is, in the view of the corporations, a distinct departure from the principles enunciated in the 15th Section of the Interstate Commerce act, which provides that in establishing a through route, "The commission shall not require any company without its consent to embrace in such route substantially less than the entire length of its railroads * * *."

The Eastern carriers interested in this matter have not been given a hearing on the subject, nor afforded an opportunity to state their objections.

In the event that a considerable volume of traffic should be diverted from the establishment of these rates, it will have the effect of introducing an uneconomic burden upon the carriers in that it will require the transportation of much of the business twice the distance that it would move through normal and well-established channels; that is to say, to New York, Philadelphia and Baltimore, and thus make necessary a higher charge on other business to overcome this economic loss.

The interested railway corporations earnestly hope that their protest in this matter will be heeded, and the proposed rates be not established.

Yours very truly,

(Signed) D. WILLARD,

Chairman, Presidents' Committee, Official Classification Territory.

December 8, 1919.

Mr. Daniel Willard,
Chairman, Presidents' Committee,
Official Classification Territory,
Baltimore, Md.

My dear Mr. Willard—I have your letter of November 26, in regard to export rates recently published from Central Freight Association territory to the South Atlantic and Gulf ports. These rates have been under consideration for nearly a year past. Numerous conferences have been held upon them. The publication is the last thing to be done. It was only after very thorough analysis and consideration that they were authorized. The basis is the same as is in effect to New York, Boston, Portland, Me.; Montreal, St. John and Halifax, Canada. This same basis has been in effect from the same points of origin to New Orleans for many years past. It is practically extending the New Orleans rate to other Gulf ports and to South Atlantic ports south of Norfolk. Eastern railroads have no good grounds for objection on the basis of mileage as the distance to the Canadian ports is very considerably greater than to the South Atlantic or Gulf ports. The gross revenue will not be changed by the new adjustment and the division of these rates will be fair and reasonable. If anything is thought to be out of line with the divisions after the roads are returned to private operation it can be readily adjusted by application to the Interstate Commerce Commission. You, I think, appreciate the difficulty at times in the past moving export freight through the ports of New York, Baltimore and Philadelphia. The expense at those ports is constantly increasing. It is a question whether the cost to carriers for the further haul to South Atlantic or Gulf ports, as compared to New York and Philadelphia, is as great as if the traffic was handled via the ports last mentioned. It is certainly in the best interest of the country as a whole to distribute the export traffic in a reasonable way among all ports, which is what we have in mind in this adjustment.

I believe these rate changes will make no serious reduction in the revenues of the Central Freight Association carriers.

Yours very truly,

(Signed) WALKER D. HINES.

The Middle West, the South Atlantic and the Gulf representatives decided straightway to meet the challenge. Their first act was to give full publicity to the correspondence, and thereafter they arranged for a full day's hearing before the Senate Com-

mittee on Commerce, January 27, to demand the continued operation of Government-owned ships on the new trade routes. They also arranged a conference of Senators and Congressmen for the night of January 27 at the New Willard Hotel, when they and delegates from the 22 States involved will devise ways and means to safeguard the new trade routes to the ports and to guarantee the continuation of the export-freight rates.

The committee of the South, representing commercial, shipping, trade and traffic organizations through the South, which was formed at the Memphis conference on January 12, with A. G. T. Moore of New Orleans as chairman, has joined hands with the Midwest-Gulf-South Atlantic Committee and arranged for a hearing before the Railroad Administration January 28.

The battle promises to be a royal one, with interference by Congress in case a decision against the Southern ports and Midwest business should be made. The hearing before the Commerce Committee is to assure such a shipping policy as will enable Southern ports to have the use of Government ships on reasonable terms, and no bill is likely to be adopted that does not so provide. So, also, it is not likely that any railroad legislation can be adopted which does not safeguard the rate parity which the Midwest and the Southern ports have fought so hard and long to get.

Points Out Weakness of Industrial Conference Plan.

The following letter, sent by the Southern Metal Trades Association of Atlanta, Ga., under date of January 15 to the chairman of the Industrial Conference, Washington, is of interest as showing some of the weaknesses and dangers of the plan suggested in the preliminary report:

"There are certain features of the tentative report submitted by the Industrial Conference which the Southern Metal Trades Association does not believe will be effective in relieving the present industrial situation.

"We question with great concern the wisdom of delegating to one man the authority of final judgment and decision in matters of industrial dispute. The responsibility to decide questions of such far-reaching influence and having such a possibility for good or evil is too much authority for one man, especially when he may be entirely influenced by political motives.

"In like manner we feel that the ability of a Secretary of Labor to nominate, subject to the President's approval, an absolutely impartial and equitable representation of employees who have the best interests of the country, mankind and industry at heart is dealing too much into probabilities; neither do we feel that a Secretary of Commerce, as one man, is fitted to nominate employers either as members of the conference or to serve on the national tribunal or regional boards.

"Another salient weakness of the plan as submitted by your conference is the failure to incorporate anything that would make the decisions and rulings of the regional boards or national tribunal to be binding. We have observed that labor unions care nothing for previous agreements or understandings when it is to their selfish interest to break them. Such decisions or agreements as you propose must be strengthened by necessary legal and moral responsibility and be entered into by both parties or the functioning will fail in a crisis. There is no equality or justice in expecting or demanding an employer to assume full responsibility when the employee assumes absolutely none.

"There must also be included positive assurance, without the remotest chance of misconstruction, that "collective bargaining" or privileges to supplant open shops with closed shops shall not be possible unless the employer desires to do so.

"The prohibiting of certain classes of Government employees to affiliate with organizations using the strike power is not clear in its purpose. If it is wrong for this particular class to affiliate themselves with a strike organization, why should it not be wrong for all Government employees?

"In conclusion, we earnestly advise against leaving any point open to contention. The issue should be met full in the face, with no obscure means or intention and no failure to make clear, in every detail, just what is proposed.

"The Southern Metal Trades Association offer these suggestions in appreciation for what the conference has done, and express the hope that their application may prove of assistance to the final conclusion of the conference.

"W. E. DUNN, JR.,
"Secretary."

Port of Jacksonville Now to Engage in Campaign of Advertising.

Jacksonville, Fla., January 26—[Special.]—An advertising campaign for the port of Jacksonville to be conducted by the City Commission and a group of interested concerns will be launched within a few weeks.

Following close upon the similar effort for the varied attractions and resources of the city made by the advertising committee of council, this endeavor will even more widely make known the water-front facilities which many regard as Jacksonville's greatest asset.

A meeting of persons concerned with the upbuilding of the business of the port was held about two weeks ago, at which in a few minutes there was raised an advertising fund of about \$12,000, since increased by other contributions.

After careful consideration of ways and means to secure the utmost value to the port from the proposed campaign the committee in charge decided to spend about two-thirds of the sum in trade journal, periodical and newspaper space, and to devote one-third of the money to the publication of a booklet and follow-up literature, photographs and other illustrative material, travel and office expenses, etc.

The advertising will be prepared and placed, both in domestic and foreign journals, by the local advertising agency, under the direction of a special committee of the subscribers to the fund. A careful and exhaustive study of publications, to determine which are best fitted to influence shipping interests, will be made before the list of mediums that will be used finally is decided upon.

It is proposed to use about one-fourth of the sum appropriated for paid advertising in trade journals of shipping and allied lines, domestic and foreign; one-fourth or thereabout in periodicals of national character largely read by business men, and approximately one-half in newspapers of cities from which traffic for the port of Jacksonville may be developed. Many of the advertisements will be illustrated.

For the supply of information concerning the port, its advantages of location, equipment and facilities, which space limits will prevent from appearing in detail in the advertisements, a comprehensive but concise book is planned. At intervals, following the mailing of this book, persons and firms that answer the ads will be forwarded other printed matter further describing the water-front enterprises of Jacksonville.

The advertising agency will look after the collection and distribution of facts and figures, news items and pictures concerning port activities, maintaining a bureau of information for the purpose without expense to the contributors to the advertising fund. This bureau will work in conjunction with special correspondence, feature writers, etc., for the widest possible dissemination of port stories of interest and value to shippers.

It is the intention of the committee of prominent business men who have charge of the campaign for it to cover a period of six months or longer. Every precaution will be taken to avoid unnecessary and unwise outlay of money. Only mediums of acknowledged merit will be advertised in, and no administrative expenses will be incurred except for essential clerical help, postage, stationery, etc. Representatives of the firms contributing to the fund and members of the City Commission will give their time to the direction of the campaign.

A meeting of the executive committee of the movement will be held some time this week to review and pass upon the preliminary work of outlining the plans and laying the groundwork for the campaign. As soon as these initial steps have been taken the writing and illustration of copy will be undertaken, both for the periodical advertisements and the booklet. The bureau of information already has been established in the Graham Building. Shipping interests are urged to report happenings of news interest that these may be brought to the attention of the newspapers and other publications read by people who should know more of the port of Jacksonville.

Texas Rock Crusher to Cost \$275,000.

Estimated to cost \$275,000, the Thurber (Tex.) Earthen Products Co. will build a rock-crushing plant with hourly capacity of 100 tons. This company has organized with Ed. S. Britton as general manager and Preston K. Yates of New York as the engineer-architect. The plant will be located in Eastland County, Texas.

Communist Party Advocates Overthrow of the Government by Force, Secretary of Labor Wilson Declares, After a Full Hearing

[Special Correspondence Manufacturers Record.]

Washington, January 26.

A decision of fundamental importance has been rendered by Secretary of Labor Wilson in connection with the deportation of alien agitators. The Secretary has decided that the Communist party is in fact a revolutionary organization, the purpose of which is to overthrow the Government by force. The effect is to assure the deportation of hundreds of Reds who, had the Secretary decided otherwise, would have been permitted to remain in the United States.

An elaborate array of counsel appeared before Secretary Wilson and presented arguments to show that it was entirely legal for the Communist party to carry on the kind of propaganda in which it had been engaged.

It is pointed out that while at the Capitol legislators were refusing to enact anti-sedition laws and were rivaling one another in their anxiety "to get from under" what they feared might become an unpopular law, the Department of Labor, after full inquiry, was concluding officially that the Communist party is in fact a revolutionary party.

The opinion of the Secretary follows, in full:

Englebert Preis, age 31; native of Austria; entered the United States at Port Huron, Mich., on November 13, 1915, having arrived in Quebec by S. S. Scotian, June 14, 1914. This is a case arising under the provisions of the Act of October 16, 1918.

It is alleged that the alien is a member of the Communist Party of America, which is affiliated with the Communist International. The alien admits membership in the Communist Party of America and that it is affiliated with Communist International. The sole question, therefore, to be determined by the Secretary of Labor is: Is the Communist Party of America such an organization as is described in the Act of October 16, 1918, membership in which makes an alien liable to deportation? The language of the act applicable to this particular case is as follows:

"Section 1. * * * aliens who are members of or affiliated with any organization that entertains a belief in, teaches or advocates the overthrow by force or violence of the Government of the United States. * * *

"Section 2. * * * shall, upon the warrant of the Secretary of Labor, be taken into custody and deported in the manner provided in the immigration act of February 5, 1917."

It will be observed that belief in, teaching or advocating the overthrow of the Government of the United States is not alone sufficient to bring any organization within the scope of the act. There must in addition be a belief in, teaching or advocacy of force or violence to accomplish the purpose. Bearing that in mind we may proceed to an examination of the facts.

The Manifesto and Program and Constitution of the Communist Party of America and the Manifesto of the Communist International are submitted in evidence and their authenticity admitted. The constitution of the Communist Party (see page 19 of the manifesto) requires that:

"Section 2. Applicants for membership shall sign an application card reading as follows:

"The undersigned, after having read the constitution and program of the Communist party, declares his adherence to the principles and tactics of the party and the Communist International; agrees to submit to the discipline of the party as stated in its constitution, and pledges himself to engage actively in its work."

An examination of the documents submitted clearly demonstrates the fact that it is the purpose of the Communist party to overthrow the Government of the United States. There are many statements that might be quoted showing that purpose. The two following are typical. On page 9 of the manifesto and program the statement is made:

"Communism does not propose to 'capture' the bourgeoisie parliamentary state, but to conquer and destroy it."

And again on the same page:

"The proletarian class struggle is essentially a political struggle. * * * The objective is the conquest by the proletariat of the power of the State."

Many other statements of similar purport are to be found in the same document. After having found that it is the purpose of the Communist party to conquer and destroy the Government of

the United States, the next point of inquiry is as to how the conquest is to take place.

It is apparent that the Communist party does not seek to attain its objective through the parliamentary machinery of this Government, established by and operated under the Constitution. That is made sufficiently clear by the following excerpt from page 15 of the manifesto referred to:

"(b) Participation in parliamentary campaigns, which in the general struggle of the proletariat is of secondary importance, is for the purpose of revolutionary propaganda only."

And again from pages 9 and 10 of the same document:

"In those countries where the conditions for a workers' revolution are not yet ripe the same process will go on. The use of parliamentarism, however, is only of secondary importance."

And further on page 10:

"The parliamentarism of the Communist party performs a service in mobilizing the proletariat against capitalism, emphasizing the political character of the class struggle."

The parliamentary processes established by our Government are to be discarded or used for propaganda purposes only, and other means adopted for overthrowing the Government of the United States. These means are stated at considerable length and frequently reiterated, seemingly for purposes of emphasis. The conquest of the power of the State is to be accomplished by the mass power of the proletariat.

Strikes are to be broadened and deepened, making them general and militant, and efforts made to develop their revolutionary implications. The strike is to be used not simply as a means to secure redress of economic wrongs, but as a means through which the Government may be conquered and destroyed. A few excerpts from the Communist Party and Communist International manifestos will make these statements evident.

Thus on page 10 of the Manifesto and Program of the Communist Party of America is the following:

"The conquest of the power of the State is accomplished by the mass power of the proletariat. Political mass strikes are a vital factor in developing this mass power, preparing the working class for the conquest of capitalism. The power of the proletariat lies fundamentally in its control of the industrial process. The mobilizing of this control against capitalism means the initial form of the revolutionary mass action that will conquer the power of the State."

And again on page 11 of the same document:

"Mass action is industrial in its origin, but it acquires political character as it develops fuller forms. Mass action in the form of general political strikes and demonstrations, unites the energy and forces of the proletariat, brings proletarian mass pressure upon the bourgeois state. The more general and conscious mass action becomes the more it antagonizes the bourgeois state, the more it becomes political mass action. Mass action is responsive to life itself, the form of aggressive proletarian struggle under imperialism. Out of this struggle develops revolutionary mass action, the means for the proletarian conquest of power."

And further on page 12 the same document:

"Strikes of protest develop into general political strikes and then into revolutionary mass action for the conquest of the power of the State. Mass action becomes political in purpose, while extra parliamentary in form; it is equally a process of revolution and the revolution itself in operation."

Then on page 16:

"The Communist party shall participate in mass strikes, not only to achieve the immediate purposes of the strike, but to develop the revolutionary implication of the mass strike."

And then making the purpose still more clear we have the following from page 30 of the manifesto of the Communist International, with which the Communist party of America is affiliated and whose manifesto is accepted as part of the policy of the party:

"The revolutionary era compels the proletariat to make use of

the means of battle which will concentrate its entire energies, namely, mass action, with its logical resultant direct conflict with the governmental machinery in open combat. All other methods, such as revolutionary use of bourgeois parliamentarism, will be of only secondary significance."

From these quotations and numerous other statements in the manifesto, not here quoted, it is apparent that the Communist Party of America is not merely a political party seeking the control of affairs of State, but a revolutionary party seeking to conquer and destroy the State in open combat. And the only conclusion is that the Communist Party of America is an organization that believes in, teaches and advocates the overthrow by force or violence of the Government of the United States.

It does not devolve upon the Secretary of Labor officially to determine whether Congress was wise in creating the law or the Communist party wise in creating the facts. It is his duty to apply the law to the facts as he finds them. It is mandatory upon him to take into custody aliens who are members of this organization and deport them in the manner provided for in the immigration act of February 5, 1917.

Your memorandum of January 17, 1920, recommending that the Department issue its warrant for the deportation of Englebrecht Preis, such deportation to be to Austria, at Government expense, is hereby approved.

(Signed) W. B. WILSON, Secretary.

Use of Bank Acceptances in 1919.

In the first annual report of the Discount Corporation of New York, President John McHugh says to the stockholders: "Your corporation commenced business on the second day of January, 1919, with a paid-in capital of \$5,000,000 and a paid-in surplus of \$1,000,000. During the year just closed the volume of business handled by the corporation reached the aggregate sum of \$854,986,121, of which amount \$448,186,691 was in acceptances purchased, and \$400,799,430 in acceptances sold. The difference between these amounts, namely, \$41,387,261, represents the acceptances which were carried to maturity and those on hand at the close of the year.

"The net receipts of the corporation for the year over and above its expenses of operation, taxes, etc., amounted to \$257,506.51, which is equivalent to 5.15 per cent on the corporation's capital, or 4.29 per cent on the combined capital and surplus. Out of the profits there has been charged off the sum of \$23,182.69 for furniture, fixtures, organization and legal expenses, and the remainder, \$234,323.82, has been carried to the undivided profits account of the corporation, as indicated in its statement herewith.

"In view of the fact that the operations of the corporation in the first year of its business were to a large extent pioneer in character, and in view of the further fact that the operations of the corporation in contributing to and maintaining a market for the acceptance of the banking community are profitable to the banks interested, we are confident that the actual showing will prove satisfactory."

Mississippi Progress Reflected in Bank Deposits.

Jackson, Miss., January 24—[Special.]—A story of progress and thrift in Mississippi is told in the biennial report of the State Banking Department, which shows an increase in bank deposits for the past 12 months of \$65,000,000, or more than 150 per cent.

There is now on deposit in the 464 banks of the State \$168,000,000.

The capital stock of the Mississippi banks during the same period has increased \$1,500,000. The total capital stock of all banks in 1918 was \$17,500,000; in 1919 it was \$19,000,000.

In 1918 there were only six new banks formed, representing a capitalization of only \$150,000, while in 1919 there were 19 new banks chartered, aggregating capital stock of \$411,000.

E. F. Anderson, chairman of the bank examiners for Mississippi, has made certain recommendations to the State Legislature, now in session, which, if adopted, he believes will bring about a general improvement in the banking conditions of the Commonwealth. Mr. Anderson anticipates a very marked increase in bank deposits in 1920.

Extensive Improvements at Chattanooga Plant.

Chattanooga, Tenn., January 24.

Editor Manufacturers Record:

The program of developments of this company at the furnace is as follows:

We are making the stack 20 per cent larger by the method of lining it, and increasing the size of the bosh and hearth. This lining will be completed in 10 days, after which the furnace will be dried out for three weeks or so. We are making the engine-house and dry-air plant fireproof by the aid of metal lath and plaster, which will give them the appearance of concrete buildings. The pumping installation is being improved by substituting two centrifugal pumps for putting water into the stand pipe, in place of nine piston pumps previously used. Either one of the centrifugals has the combined capacity of all nine of the old pumps. The electrical equipment is being standardized to 250 volts, and the laries, pumps, pig breaker, lights, etc., will operate under one voltage. The above, along with the general repairs, rebuilding of the trestle, new ties in the tracks and overhauling the locomotives, constitute the contemplated improvements at the furnace.

At the ore mines we are reaching the soft ore deposits with extensive extensions of the track, and installing gasoline locomotive service, said motors handling the ore as loaded in the cuts direct to the tippie in railroad cars. The installation of picking belts to facilitate the removal of all slate from the hard ore, thereby improving the quality; the erection of a washhouse and a moving-picture hall, are a part of the program.

At the coal mines we are driving through from the back side, thereby reducing the haul of the coal to a minimum; substituting gasoline locomotives for mule-power wherever possible and using automatic mine doors in place of trappers. We are greatly simplifying the coal washer, making same more convenient and efficient. We propose to open up the boundary of 5000 acres of coal back under the main Cumberland Mountain Plateau. This land has been gone over by the State Geologist and pronounced most valuable. Prospect work on this coal shows an unusual thickness and more regular conditions than exist in the foot hills in the mines which have been operated by the company for a great many years. A moving-picture hall, separate washhouse for both white and colored men, and a general overhauling of the plant and improved sanitary conditions, together with a more efficient method of handling the washed coal to the ovens, will greatly simplify and improve the practice. All of this work is well under way and will be completed shortly.

No elaborate experiments are being tried by the management. Only such improvements at any of the plants are being installed as have been tried and found satisfactory.

In addition to the usual Southern iron manufactured, Chattanooga furnace proposes to manufacture the greater portion of its product into low phosphorus pig-iron. The company controls large quantities to low phosphorus ores and will, therefore, be enabled to compete with metals of two distinct qualities.

W. W. TAYLOR, V.-P. and Gen. Mgr.

Georgia Industrial Council Formed.

Atlanta, Ga., January 20—[Special.]—Presidents and secretaries representing virtually all of the industrial organizations of Georgia have formed the Georgia Industrial Council here. To retain the present prosperity of the State's industries and make for further co-operation and development is the announced purpose of the new organization. It was pointed out that 500,000 people in Georgia earn their livelihood in factories.

It is announced also that the Georgia Manufacturers' Association will hold its convention and industrial conference in Macon April 14 and 15. There are about 4000 manufacturers in the State, and it is expected that at least 1200 will attend the convention.

Work Begun on Miami's \$1,000,000 Hotel.

Work was started January 1 on the \$1,000,000 Hotel Flamingo, which Carl G. Fisher is to erect at Miami, Fla. The hotel will be 11 stories in height, with 200 rooms, each with bath. Rubush & Hunter of Indianapolis, Ind., are the architects.

Pan-American Conference Proposes That the United States Fund the Latin-American Debt to Europe

[Special Correspondence Manufacturers Record.]

Washington, D. C., January 26.

The most important recommendations adopted by the Pan-American Financial Conference, which sat in Washington last week, was "that the banking interests of the United States study the possibility of financial relief to Europe by repaying Latin-American obligations held in Europe by means of new loans granted in the United States to the respective Latin-American countries."

Adoption of the metric system, unification of rates and taxation, extension of the system of commercial attaches, the protection of trade-marks and copyrights and better transportation, postal and telegraph facilities also were recommended.

The title of the International High Commission was changed to "The Inter-American High Commission."

When the report of the resolutions committee was submitted for approval, all the countries present voted in the affirmative, but the delegations of Bolivia, Brazil and Venezuela noted reservations dealing for the most part with amplifications of certain sections or recommending changes in wording.

The 18 recommendations of the committee were as follows:

1. That the name of the International High Commission be changed to "The Inter-American High Commission," the better to indicate its constituency and sphere of work.

2. That the report of the transportation committee, recommending increased freight and passenger ocean service to South America, be transmitted to the United States Shipping Board for consideration and action that the recommendations dealing with railroad transportation, postal and telegraph facilities be sent to the Inter-American High Commission for action.

3. That the legislation of certain States of this country be so modified as to permit operation of branches of Latin-American banks within their jurisdiction, under proper regulation, so as to secure equality of treatment.

4. That the Inter-American High Commission study possibility of securing uniformity and equality of treatment in laws regulating foreign corporations in Latin America.

5. That there be developed increased use of acceptances for the purpose of financial transaction involving import and export of goods. The hope is expressed that the United States will offer a widening market for long-time Latin-American securities.

6. That the Inter-American High Commission be asked to further establishment of an international gold fund, which plan already has been adopted by several South American republics.

7. That the Inter-American High Commission bring to the notice of the American Government the desirability of adopting a uniform law on the subject of checks.

8. That the Inter-American High Commission be asked to study the best method of avoiding simultaneous double taxation of individuals and corporations in Latin-American countries.

9. That the American countries which have not done so ratify the convention adopted by the International American Congress at Buenos Aires in 1910 for establishment of an international bureau at Havana for registration of trade-marks.

10. That American countries which have not done so ratify the convention adopted at Buenos Aires in 1910 concerning patents and copyrights.

11. That the Webb law be amended to permit American companies, importing or dealing in raw materials produced abroad, to form under proper Government regulations organizations enabling such companies to compete on terms of equality with companies of other countries associated for the conduct of such business.

12. That the commercial attache system be extended with appropriate training for all branches of the foreign service as a means of developing commercial relations.

13. That a simultaneous census be taken by all American countries at least every 10 years, observing uniformity of statistics.

14. That the metric system of weights and measures be universally employed, and until such time as that is done, articles marked by the standards used in the United States also be marked according to the metric system.

15. That the plan of arbitration of commercial disputes in effect

between the Bolsa de Comercio of Buenos Aires and the Chamber of Commerce of the United States be adopted by all the American countries.

16. That the Inter-American High Commission be asked to study the creation of an Inter-American Tribunal for the adjustment of questions of a commercial or financial nature involving two or more American countries and the determination of such questions by law and equity.

17. That the importation of raw materials into any country shall not be prevented by prohibitive duties.

18. That the banking interests of the United States study the possibility of financial relief to Europe by repaying Latin-American obligations held in Europe by means of new loans granted in the United States to the respective Latin-American countries.

Dr. Jose Luis Tejada of Bolivia outlined before the Congress the plan for the extension of financial aid to Europe by the United States through repayment of Latin-American obligations held in Europe.

Such a plan, he said, would not only aid Europe, but would materially help Latin America. Former Secretary of the Treasury William G. McAdoo, he said, in his address to the congress, had made clear that the United States must make loans to Europe, and that the Latin-American financiers placed great confidence in the superior intelligence and experience of Mr. McAdoo. They knew him, said Mr. Tejada, and recognized in him the founder of that phase of Pan-Americanism which had taken form in this congress.

Latin, America, he said, agreed that the United States must help Europe as all the economic problems of the world hinge on the reconstruction of Europe, but that direct loans were not now practicable. The situation was hampered, he continued, by the problem of exchange.

"The dollar is not of less value," he said, "although its buying power may have been affected by the high cost of living. But other money has lost value in comparison with the dollar. We must normalize exchange by production, economy and export and also by credit. One is a matter of time and the other one of finance, capital granted as credit, is only time loaned to the debtor.

"All Latin America has been financed by Europe. As debtors we bear the moral obligations to return the savings of Europe when she needs them. If the United States decided to grant help to Europe, let her do it by allowing Latin America to pay its obligations to European countries.

"This method would allow Latin America to take advantage of the condition of exchange and would work no harm to Europe as the exchange situation must be adjusted before her reconstruction can begin. And no advantage would accrue to Europe by keeping her South American securities, because they will not be worth more later. On the other hand, there would be created a market for European securities, as the South American countries, in paying their obligations, would buy the money of those countries, thus tending to stabilize exchange.

"If you thus allow Latin America to pay her debts with economy, the results of that economy, you may be assured, will be invested in the construction of railroads and development of other industries." Mr. Tejada recommended that the banking interests of the United States study this proposal for new Latin-American loans.

Enrique Martinez Sobral of Mexico, at the request of American members of the Mexican group, outlined the economic situation of that country for the benefit of the congress. He laid emphasis on the fact that Mexico now was firmly established on a gold basis, and that it had approximately \$100,000,000 gold in circulation.

In fact, he said, gold was the only medium of exchange, as even the fractional silver currency, issued to facilitate commercial transactions, had been withdrawn from circulation because of hoarding induced by the high price of silver. He declared that in the last three years the depreciated Mexican paper currency which had fallen at times as low as one-tenth of 1 per cent on the peso in comparison with the dollar had been successfully retired.

"A county," he said, "which has passed through such an ordeal

as Mexico and which can so rebuild its finances is worthy of confidence. Mexico is making a strong effort to repay investments and to do the best it can in spite of the lack of foreign capital."

It must be borne in mind, he said, that the world war reduced the amount of capital for foreign investment and that Mexico has had five or six years of internal war, but that Mexico was picking up and returning to normal. He said the gold production of 1918 was 25,000 kilograms as compared with 8000 kilograms in 1914, and now was about the same as it was 10 years ago. She produced 2,000,000 kilograms of silver in 1918 as compared with 800,000 in 1914.

Reports show imports of 164,000,000 pesos and exports of 365,000,000 pesos in 1918, and the larger part of this trade was with the United States.

Dr. Carlos Sampaio, chairman of the Brazilian delegation, addressed the congress on the problems of Brazil as a debtor nation. After outlining the effect of the war on Brazil he declared that Latin America was the proper field for North American enterprise.

"I can declare," he said, "that the program of the Brazilian Government is to reduce public expense, improve the fiscal system, realize the equilibrium of the budget, contract loans exclusively for reproductive purposes, reorganize the banking system to give more elasticity to the currency and abandon once for all the practice of issuing inconvertible currency.

"By so doing we will gradually effect a sane basis of our monetary system and the improvement of our finances. Our purpose will be to increase production and reduce imports, to stabilize exchange, pay interest on loans and fill the gaps left by deficits.

"The prosperity of a nation is related to its capacity for production, depending upon land, capital and labor. The land we have in rich abundance. We have not as yet explored two-thirds of it, and it will be for us to follow the example of the great American who discovered the Roosevelt River in Northern Brazil. Of capital we have not enough, and are obliged to look to other countries. Our man-power is not sufficient, but men will come to us, if only to get away from the muddled conditions of Europe.

"What we wish to see now is Americans at work in Brazil with our money as the Chicago packers are now developing our meat industry and as the smelters are trying to do with iron ore and manganese."

Dr. Sampaio alluded to the blow to the Brazilian rubber industry which the cultivation of rubber in the Orient had dealt, and urged that America aid to further develop the Brazilian product.

"Money is also raw material," concluded Dr. Sampaio, "and we Latin-American countries need this raw material to have the honor to help in the reconstruction of the world. We must consolidate and increase commercial interchange between your country and ours, and to effect this better ocean transportation is a primordial necessity.

"I want to see Americans come to Brazil, for even if you do not stay, we shall have had the example of your experience, your inventive spirit, your activity and your inexhaustible energy."

To Build Houston Factory for Varnish Manufacture.

Houston, Tex., January 23—[Special.]—According to Adrian D. Joyce of Cleveland, O., president of the Glidden Company, which has a capital stock of \$14,000,000, that corporation will build a large plant for the manufacture of varnishes in Houston. The site for the proposed industry has been purchased and preparations are being made for building the first unit of the plant, to cost \$100,000. The site was selected by Mr. Joyce, J. D. Thomy of St. Louis, Mo., vice-president of the company, and S. S. Burris of Dallas, district superintendent for Texas for the company.

About six months ago the Glidden Company opened a large distributing depot for its products in Dallas, but when the decision to establish a factory in Texas was reached Houston was chosen because of the ship channel and other advantages in transportation facilities.

"Our company will spend more money in the South than in any other section of the country," said Mr. Burris. "We will manufacture paints and varnishes here especially adapted to local climatic conditions, and will eventually do an exporting business through your deep-water port. At first we will concern ourselves with the domestic demand, which is large and constantly growing. Texas, and especially South, Southeast and Southwest Texas, is one of the best territories in the country for our line."

Much Ungathered Cotton in Texas—General Agricultural Outlook Is Poor, With Acreage Short.

Austin, Tex., January 20—[Special.]—S. S. Frazer, secretary of the State Association of Ginners, has just given out a statement in which he says there is more cotton ungathered in the fields of Texas than ever before at this time of year. The gins are no longer running regularly except in certain localities, but they have enough work to put in half time.

The cotton is not of very good quality, of course, but there is a market for it, and pickers are getting \$3 per 100 pounds for it. At that they cannot work steadily because of the bad weather which prevails most of the time.

Less land has been broken to date than is usually broken by the middle of November, asserts Sam H. Dixon of the department of markets and warehouses, who has had reports from his agents. The farmers are simply unable to get into their fields for the purpose of plowing. They are willing, many of them, to turn under what cotton is left if they can only get to plowing.

In the heavy black lands of Central and North Texas it will require three weeks of good weather to put the land in condition for plowing, and by then the time for planting corn will be at hand.

The outlook is the poorest agriculturally in 50 years in Texas. It is true there have been other years when the farmers were behind, but the conditions now are different, and there is a labor shortage everywhere except in Eastern Texas, where many of the negroes who wandered away to the Northern cities are returning. The negroes who were in the army are also getting back, and they are willing to work, though they demand a high price for their labor.

The acreage in wheat is short, the acreage in oats will be very short, and it is probable that the acreage in corn will be cut down materially, all of which means that the acreage to be planted to cotton is going to be limited only by the facility of obtaining seed. That will be the last hope of many of the farmers of Texas for a money crop.

There is a shortage in corn in some sections of the State now, but there is an abundance in other sections as soon as the embargo on the movement thereof can be adjusted. The railroads of West Texas have sidings filled with loaded cars, but are paying so much attention to the oil game that they cannot find time to move the products of the farms.

Prompt Action Necessary to Prevent Pirating of Motor Trade Names in Portugal.

Washington, January 26—[Special.]—The Department of State has been informed that reports circulated to the effect that steps had to be taken prior to January 15, 1920, to contest the attempted registration in Portugal by Silva Carmo of Oporto of the trade names of certain American automobiles are incorrect. According to reports received from Lisbon, the procedure for registration in Portugal allows a period of three months for the filing of protests after notice of application for registration has been published officially.

The department is informed that registration of the trade names of six American automobiles has already been made according to law, but it appears that these registrations may either be cancelled before the courts or the matter settled out of court. Applications for registration of about 35 additional names are reported to have been filed by Carmo in July, 1919.

Inasmuch as the department is informed that these latter applications have not yet been published officially, it would appear that adequate time remains for proper protests to be filed. The filing of such protests, however, must await the actual official publication of the notices of application for registration. Meanwhile it appears advisable for the companies concerned to register their trade-marks or names in Portugal.

Hardwood Flooring Plant Costing \$500,000.

Oak flooring and oak trimmings will be manufactured at Memphis in a \$500,000 plant which the E. L. Bruce Co. of Little Rock will build at the Tennessee city. A 20-acre site has been purchased for \$38,000 and a number of buildings will be erected, the main factory to be of brick, concrete and steel, 220x150 feet. This initial unit of the Bruce hardwood plant will employ 200 operatives.

\$400,000,000

FOR SOUTHERN HIGHWAYS

THE symposium of articles herewith unfolds the story of progressiveness in highway development of the South, a development that will touch in an intimate way the lives of every man, woman and child in the South not only by enriching their lives through greater opportunities, religious, educational and social, but also in a material sense by stimulating to a greater degree the development of the South's resources of mine, forest and field.

"The Spirit in Which the Nation Must Build Highways."

Editorial.

"Comprehensive Survey of Highway Situation in the United States—Demand for Better Highways Confronted by Problems Requiring Careful Consideration for Solution."

By THOS. H. MACDONALD, Chief, Office of Public Roads.

"Need for National System of Highways."

By H. G. SHIRLEY, Secretary, Federal Highway Council, Washington, D. C.

"Motor Transportation and Our Highways—Making Past and Present Meet."

By F. W. FENN, Secretary Motor Truck Committee, National Automobile Chamber of Commerce, New York City.

"\$4,000,000 for Alabama's 1920 Road Program."

By W. S. KELLER, State Highway Engineer, Montgomery, Ala.

"Arkansas' Stupendous Road Program of \$100,000,000."

By W. B. OWEN, Commissioner of State Lands, Highways and Improvements, Little Rock, Ark.

"Permanency, The Keynote of Florida's Road Program."

By J. P. CLARKSON, Secretary State Road Department, Tallahassee, Fla.

"Georgia Adopts Definite Highway Program."

By C. M. STRAHAN, Chairman State Highway Board, Athens, Ga.

"Future Road Work in Kentucky."

By WILLIAM N. BOSLER, Department of Public Roads, Frankfort, Ky.

"Maryland, With \$30,000,000 Present Investment in Highways, Now Plans \$30,000,000 Extension."

By FRANK H. ZOUCK, Chairman State Roads Commission, Baltimore, Md.

"Mississippi Making Great Strides in Highway Improvements."

By XAVIER A. KRAMER, State Highway Engineer, Jackson, Miss.

"Missouri Votes Millions for Durable Highways."

By ALEXANDER W. GRAHAM, State Highway Engineer, Jefferson City, Mo.

"New Highways for North Carolina to Cost Over \$15,000,000."

By FRANK PAGE, Chairman State Highway Commission, Raleigh, N. C.

"Oklahoma Planning for Greatest Road-Building Year."

By MAX L. CUNNINGHAM, State Engineer, Oklahoma City, Okla.

"South Carolina Developing Comprehensive State Highway System."

By W. R. TURBEVILLE, Columbia, S. C.

"Over \$11,000,000 for Modern Highways in Tennessee."

By W. P. MOORE, Chief Engineer, Department of Highways, Nashville, Tenn.

"Texas to the Forefront With Over \$125,000,000 for Modern Highways."

By H. T. WARNER, Austin, Tex.

"Virginia's Comprehensive Highway Plans: \$12,000,000 for 1920 Work."

By C. S. MULLEN, District Engineer, State Highway Commission, Richmond, Va.

"\$15,000,000 for West Virginia Road Building in 1920."

By C. P. FORTNEY, Chairman, State Road Commission, Charleston, W. Va.

The Spirit in Which the Nation Must Build Highways.

THE educational advancement of the country will be halted by the ruin of country schools

WITHOUT GOOD HIGHWAYS.

The religious and moral advancement of the country will be stunted through the destruction of country churches

WITHOUT GOOD HIGHWAYS.

The food supply of the nation will grow steadily less and prices steadily higher

WITHOUT GOOD HIGHWAYS.

Farm life will grow less and less attractive, and the energetic young people will continue to rush from country to city, which is even now endangering the civilization of the nation,

WITHOUT GOOD HIGHWAYS.

The transportation problems of the country are growing more and more acute; our railroad system is practically broken down. More than \$10,000,000,000 should have been spent upon railroad expansion in the last ten years to have kept the railroad facilities equal to the growing needs of the country. The transportation situation will become more and more dangerous to the welfare of the nation

WITHOUT GOOD HIGHWAYS.

Every industry of the nation, its educational, moral and religious advancement, its food supply, which takes hold directly of every man's welfare, will suffer irreparable damage unless we enter upon a highway building period by comparison with which even all the highway construction work now planned will sink into insignificance.

Individuals paid out last year for automobiles and motor trucks, tires and accessories about \$2,500,000,000, and some automobile makers claim that the sales in 1920 will be twice as great as in 1919. It seems safe to estimate that the total in 1920 for automobiles, motor trucks, tires and accessories will aggregate nearly \$4,000,000,000.

The amount spent by all the counties and States and the National Government for the building of highways over which automobiles and motor trucks will run figures up to but a beggarly percentage of the vast sum spent for these great additions to the nation's business activities.

Five times as much money is being spent for automobiles and motor trucks and tires as is being spent for the expansion of railroads of the country.

Five times as much is being spent for these things as will this year be expended on all the highway work in this vast country. It is true that the amount projected for this year is a little larger than that one-fifth would be, but it is hardly possible that arrangements will be completed by which the total amount available will be put out during the year.

The counties, the States and the Federal Government must carry on highway work commensurate with the meaning of highways to civilization and with the magnitude of expenditures that are being made, through automobiles and motor trucks, for increasing the transportation facilities of people and things.

The railroads cannot possibly catch up with the growth of the country. They are ten years behind time.

Neither Government ownership, with all the financial backing of the nation, nor private ownership, with all the energy

and the capital which the great financial interests of the country can throw into railroad expansion, can within the next ten years bring the railroads up to the degree of efficiency which will be required.

The magnitude of the passenger and freight traffic is growing far more rapidly than it is possible to build railroads and expand existing facilities.

In 1906 the MANUFACTURERS RECORD, in a carefully prepared statistical statement, showed the inevitable breakdown of the railroads of the country by 1916 through a growth of traffic which would far exceed the growth of their facilities unless there should be a vast expansion of railroad work.

That prediction was fulfilled.

The only possible light upon the transportation situation which can now be seen is the extension of motor truck and automobile facilities rapidly enough to lessen the strain on the railroads to meet the growing needs of the country. Imagine for one moment the chaos which would exist if there were no automobiles and no motor trucks anywhere in America to lessen the pressure upon the railroads for passengers and for freight. The situation would be inconceivably bad.

The growth of the railroads cannot be made rapid enough to meet the conditions which are ahead of us.

The automobile and motor truck have taken rank among the outstanding influences of the world. They mean to the advancement of civilization fully as much as the first railroad meant in human affairs. Their growth surpasses anything that the world has ever known in any other industry, and yet every student of affairs is compelled to recognize that the automobile and the motor truck are still in the infancy of their usefulness.

The highway of the most modern construction, capable of standing the severest motor truck traffic and of sufficient width to justify practically any density of traffic, becomes to the country today more important than was the building of our vast railroad system.

Until we build highways far out into the country, and connect up practically the entire farming sections with the nearest markets, we shall not be able to stem the rush of population from the country to the city. The danger of this trend away from the country, which is causing city population to increase four times as rapidly as country population, does not yet seem to have been fully understood. The individual boy or man, finding that he can do better for himself financially in the city than in the country, rushes to the city for employment. He becomes a consumer of country products, whereas when on the farm he was a producer. The number of these consumers is growing so rapidly that the nation must soon face the problem of how to feed city population. In olden days, before this trend was pronounced, roads everywhere were bad and city conveniences had not been fully developed. Farm life had about as many comforts and attractions as the city, but when we entered upon a marvelous industrial expansion which changed the whole character of the nation and, indeed, of the world, we entered a new epoch. We must meet its problems.

Standing out far and above all other issues is the one dominant question of good highways as the factor in keeping

people in the country. If country life is made as comfortable and attractive to the young people as is city life, we shall lessen the movement toward the cities. Until we do this we cannot hope for any increase in food products.

Highway building is one of the supremest issues before this country. Upon it rests to a large extent the question of Socialistic and Anarchistic unrest, based to some extent on the scarcity and high prices of food or on a better living condition for people everywhere through the adequate development of agricultural activities resting on good highways. As the country church cannot live in the old half-dead way of the past, shut off by mud roads in the winter and almost impassable sand in the summer, neither can the country school longer live to do its duty if the children are hurried by the all-compelling

influence of the hour away from the farm to the factory and the city.

The man who does the most for the advancement of civilization outside of the actual preaching of the Gospel will be the man who most largely helps to develop a spirit of building highways and who does the most to carry out the actual building of these highways.

The highway builder, therefore, becomes a missionary of the Gospel, a missionary of education and a missionary for better social conditions, and his influence will be tremendously helpful in putting the whole nation on a higher plane of religious, moral and material progress than it has ever known in the past.

Let the nation build highways in this spirit.

Comprehensive Survey of Highway Situation in United States— Demand for Better Highways Confronted by Problems Requiring Careful Consideration for Solution.

By THOS. H. MACDONALD, Chief, Office of Public Roads, United States Department of Agriculture.

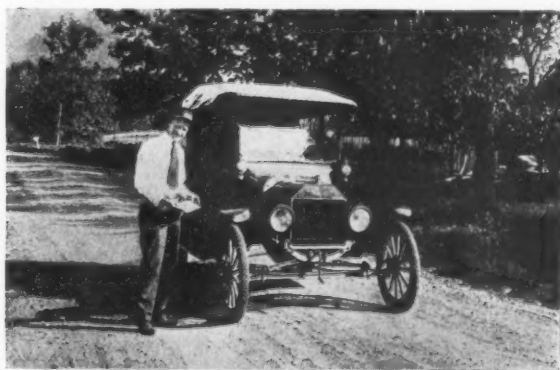
If we were nearing the end of a super program of road building, to finish the task and to provide the last connecting links that would join many miles of completed highways into finished systems, we might justify attacking this year's road building without too much caution. If we had passed through a period of road production of proportions such as are now demanded, we might count on an industrial army, well trained to the task and properly officered. If we had produced in any one year a considerable percentage of the road-building materials now needed, we might with confidence expect the necessary expansion of production from established plants. If we had not for practically three years dammed back a rapidly swelling flood of projected private as well as public improvements, we might seriously expect these to give rural highway construction the right of way, rather than compete with it for labor, materials and transportation because of its extreme importance to the nation as a whole. And, finally, if we had ever successfully transported the materials which must be hauled by rail, for the most part in open-top cars, promptly and in the quantities now necessary, we might not now anxiously question the response that our demands for greatly enlarged rail service will receive.

But none of these conditions are true and none have been equaled in the past. Rather we are entering the first year of a decade at least, during which rural highway improvement will dominate the field of public improvements. This statement is made seriously and soberly, and results not from an over-enthusiastic state of mind, but from a contemplation of the very large sums which the public have made available for this purpose, and from the knowledge that the end sought is based upon the fundamental need of the whole nation for serviceable highways. For many years the demand for the construction of better highways

has been increasing in all parts of the country. At the same time the wealth of the country has increased and made possible the financing of extensive highway programs. The development of motor vehicles and the consequent unforeseen extension of highway transportation has made it essential that adequate roadways be provided, and these within the shortest time possible. This situation is general. Nationally, it found expression in the Federal-aid road act carrying the Federal aid appropriations. In each State it has found expression in legislation providing for the acceptance of Federal aid, the creation or extension of State highway departments, and in the appropriation of funds that will much more than meet the requirements of the Federal-aid road act. In counties and districts the experience has been similar. Not a single State is missing from the ranks of those entitled to be classed as "good-roads States," and the sentiment within the States is overwhelmingly favorable to sane highway improvement.

Some weeks ago, in the columns of this periodical, summaries were given of the funds so large that only estimates could be made, that are now available from State and Federal sources, and it is not necessary to dwell further upon this fact or here to set down a startling array of county and district bond issues which have already received endorsement of the taxpayers in order to prove the statement of the extent to which we, as a whole nation, are committed to a program of highway improvement. Thus, the experiences of the year before us will make highway history rapidly, and the results of this year and the immediate following two or three years will exert a profound influence upon the future progress of highway improvement in this country.

The highway builders of the country have not, up to the present time, been free to exert themselves to the utmost in road production. Prior to the war the programs were determined by the



STRIKING CONTRAST BETWEEN ARKANSAS ROAD BEFORE AND AFTER IMPROVEMENTS.

funds available, and during the war highway production was determined by the unavailability of the elements of construction. The construction achieved during the past year, with the late start, unsettled industrial conditions, the uncertain and insufficient rail transportation for materials and unorganized construction forces, is no criterion of the results which can be achieved this year. The highway departments, contractors and material producers are keenly alert to the situation, and a rate of progress greater than has heretofore been attained is practically assured. Yet the situation calls for an earnest survey of conditions, the adoption of new methods and new policies to meet these conditions, and a realization at the outset on the part of the public that the possible rate of construction will not fully meet demands which are so widespread. This means there will have to be some waiting for completed highways, and a realization of this fact now should be sufficient to ensure the formulation of policies that will be the safest policies to follow over a period of years.

One condition must not under any circumstances be allowed to obtain. There is a limit as to the amount of production which the material resources and available labor of the country can accomplish, and the prices for road construction must not be driven beyond a reasonable level by competition among highway officials. Higher prices and not an increased mileage of completed highways could only result. It is logical, therefore, to attack this year's highway building program with this principle in mind.

It is not possible to meet the situation for increased highways in the same manner that increased local or State building programs have been met in the past, that is, by drawing on surrounding districts for additional equipment, larger labor supplies or new contractors, for at the present time practically every other region is pushing its own construction program with equal vigor, and, with minor exceptions, none have much of any surplus in materials, labor, equipment or trained men which they can spare. Naturally, the development of all of these has been greater in the vicinity of the larger population centers, and it is there that the highest-type roads are needed in the greatest amount. Also, the idea of State bidding against State or county against county, or State against county, or vice versa, is repugnant to a sane, businesslike handling of the administrative problems involved in meeting the national problem of how to handle this work without creating a competitive condition which will not only force prices higher, but that will interfere with other industries, increase the already universal shortage of labor, ask impossible performances on the part of the transportation facilities, and in this way inter-



WELL-CARED-FOR SAND CLAY ROAD. WITH PROPER CARE SUCH ROADS WILL SERVE EFFICIENTLY TRAFFIC IN SPARSELY-SETTLED FARMING SECTIONS.

fere not only with production of commodities generally, but help to sustain an unsettled industrial condition. There are no rules or lines of action that can be laid down to guide entirely the course of the administrative highway officials in the face of the present circumstances. The only effective course will be close co-operation between counties and States, neighboring States, and the State and Federal highway departments. The confidence of the public must be held, and it will not be held if competition forces prices beyond reasonable levels. This is manifestly true, since such a course will not result in the increase of production consistent with the additional outlay.

Production of highways during the ensuing year will be determined largely by four tangible and somewhat independent factors. These are the supply of cars and rail movements of road materials; the rate at which materials can be produced, which is essentially a manufacturing problem; the amount of labor which may be used for this industrial purpose without interference with other production demands, and, finally, the matter of contractors and contractors' organizations and equipment. The success with which any large program for highway construction is carried on



WELL-MAINTAINED GRAVEL ROAD IN ALABAMA.

necessarily involves the careful consideration of all of these factors and a limitation of the projected production to the available supply of each. Inquiries some time ago addressed to the district engineers of the Bureau indicate that the volume of highway work now under way is already manifesting a pronounced influence on the cost of construction, but the evidence indicates that a more pronounced influence may be expected in the future, which necessitates a prompt and nation-wide adjustment of the highway program, so that unreasonable advances in the cost of construction may be avoided. For instance, in the month of October, 1919, there were under construction approximately 1150 projects on which Federal aid had been granted. Of these, 42 per cent, or 485 projects, involved the construction of earth and sand-clay roads. These types involve practically no rail transportation. Nearly 30 per cent of the projects under construction at that time were gravel roads. It had previously been estimated by the Bureau that approximately two-thirds of these projects involved the use of no rail transportation for the movement of surfacing materials. There were, therefore, in the opinion of the engineers in the Bureau of Public Roads, approximately 110 gravel roads under construction which involved the use of rail transportation for surfacing materials. It was assumed that on the balance of the projects for other types under construction more or less rail transportation was also required. This means, according to the Bureau's prior calculations, that approximately 440 Federal-aid projects, depending more or less upon the railroads for the delivery of material, were under construction, which was substantiated by the reports from the district engineers, indicating that during the month of October rail transportation was being used on about 460 projects. To those who were depending upon rail transportation during the closing construction months of 1919 it is not surprising to find that of the 460 projects, 396 were reported to have been appreciably delayed by reason of the inability of contractors to secure cars for the prompt shipment of these materials. It is not necessary to point out the unfavorable and direct result which a continuation of such a condition is bound to have on the contract price of the higher types of pavements, as well as on the period which will be demanded for the completion of such work. It has been pointed out by the Railroad Administration that this condition can be to an extent overcome by the utilization of open-top cars during the spring months, when normally large numbers of cars have stood idle. It would seem that no great amplification of this fact would make more impressive to the road builders or

the public generally the fact that during March, April and May as high as 250,000 open-top cars were idle, while during October of the same year 396 projects out of 440 requiring rail transportation were delayed because of the unavailability of these same cars. For the purpose of keeping down costs and of utilizing our rail transportation more efficiently this Bureau has already pointed out the necessity for use of this equipment when it is available.

The supplying of materials necessary for the construction of pavement surfaces, that is, the sand, gravel, broken stone and such



MODERN BRICK ROAD. GOOD EXAMPLE OF HIGH-CLASS HARD-SURFACE PAVEMENT.

materials, will be dependent upon the plant facilities of the country. By extending the production season the production of the present plants can be greatly increased. Yet in 23 States the reports to this Bureau show that the supplies of material produced within the States is inadequate to meet the present demands for materials, and that not only in these States, but in a total of 40 States, in order to meet any increase in the rate of highway construction, additional facilities for the production of road materials will have to be developed. The present possible supply is such that in 29 States it is estimated that an extended increase in highway construction will cause a definite increase in the cost of materials of construction.

To remedy this condition will take time and involve considerable investment in more or less permanent plant facilities. State after State is now making a survey of the possible material supplies and seriously attacking the problem of a self-contained highway program. Such action is commendable and justifies public confidence in the ability of the highway departments to meet this situation.

The labor situation is difficult. During the past two or three years there has been a tendency on the part of industries to bid against each other for any surplus labor, with the result that the price paid for a day's work has increased tremendously, that the output per man has decreased, and that in general the turn-over has been abnormally high. The effect of this condition upon the prices bid for road construction has been important in the increased price paid, but has probably been even more important because of the difficulty of keeping an organization together long enough to become efficient producers. It is highly important in considering this question that the effect of highway construction should not be reflected unnecessarily in the increased cost or decreased supply of rural and farm labor. Not only must production of foodstuffs be made a first consideration, but the handling of the highway improvement program must not develop opposition to such programs in the rural districts.

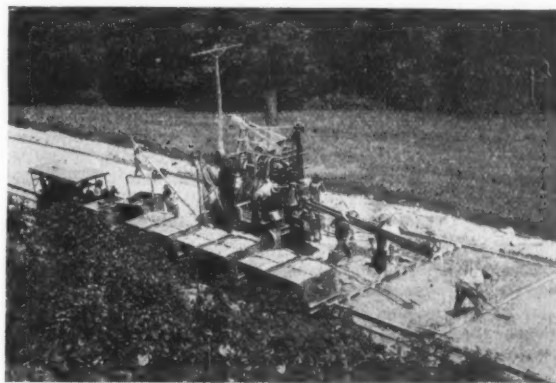
Finally, there is a limit beyond which it is impossible for existing highway construction organizations to go in handling new projects because of the amount of equipment at their disposal. As soon as the amount of work that is available exceeds the existing contractors or potential contractors and contractors' organizations there will be a tendency toward a rapid increase in prices, not necessarily because of an effort to extort unfair profits, but because whatever more work is taken than there is

equipment and organization available to handle will involve heavy outlays in the nature of capital charges for additional equipment, and the contractor will be forced into competition for labor at probably higher prices.

The reports to this Bureau indicate that in 20 States there is already a deficiency of contractors, and that this is unfavorably affecting the cost of highway construction, and these reports further state that a further increase in the rate of highway construction would adversely affect current prices in more than 30 States. While this condition is serious, it is capable of a solution. Taking all these conditions into consideration, it would appear that the rate of highway construction cannot be greatly increased without causing a serious trend of prices upward and without necessarily greatly increasing the rate of actual production. But such is not necessarily the case, and it is in wisely adjusting the coming year's program to the various classes of work that production can be increased without unnecessarily disturbing prices or industrial conditions.

About 30 per cent of all Federal-aid projects up to the present time are for grading and draining only, and most of these projects are preliminary to the placing of surfacing material of some character. Approximately 42 per cent cover grading, drainage and the placing of gravel or sand-clay top, used in this sense very generally. These projects also to a large extent are preliminary to more advanced types of road surfaces, but are used where the volume of traffic is such that something that will give better service for a time than an earth surface is desirable. The grading and draining are, of course, common to all types of highway, and whenever a permanent grade is placed on any approved route, definite progress is made toward the ultimate construction of a serviceable highway. If gravel and sand-clay surfaces are laid, a highway satisfactory for light traffic results. Indeed, these surfaces can be maintained in a very satisfactory condition even in the face of rather heavy traffic, and the construction of such roads does not impose any considerable strain upon rail transportation or material production.

In this type of construction machinery and equipment are utilized fully and man labor is reduced to the minimum. There are a great many contractors available who are experienced in dirt moving along the lines of railroad construction who would not be particularly interested in equipping themselves for building higher types of construction. It would, therefore, be exercising the best of good judgment in those districts where the highway traffic is comparatively light, where the paving programs are only starting, where material production is as yet limited and where



BUILDING A CONCRETE ROAD. MACHINERY INSTEAD OF HAND LABOR A FEATURE IN CONSTRUCTING THIS PAVEMENT.

contractors have not been developed for the higher types of pavement, to proceed with this lower class of construction as rapidly as possible. Such a plan will utilize all of the available equipment, labor and contractors toward a very definite end.

The preparation of permanent grades several years if necessary in advance of the higher forms of pavements is a practice that assures better construction in the end, and as a policy needs no defense in the face of present conditions. Moreover, in those sections where gravel and sand-clay roads can be maintained in reasonably satisfactory condition during the greater period of the

year under the traffic which will use them, the demand is for long mileages of such roads rather than high types of construction of short mileages. That is, there is a certain amount of traffic which some State highway departments must provide for to be carried over considerable distances. The pioneer work, that is, the grading, drainage and building of waterways, must come first, and must be done before any other type of construction can be built, and this traffic must continue to be carried, even though it is known that a hard-surfaced pavement will be laid in the near future. The long mileages required will prevent the hard surfacing at a sufficiently rapid rate to keep up with the traffic demands. In no other way can the present traffic needs of many districts be met. However, this suggestion does not apply to those States in which the highway traffic is the greatest, but fortunately in those districts we have now the greatest development of material supplies, number of contractors and amount of contractors' equipment.

Speaking very broadly, when the volume of traffic becomes so large that the construction of gravel and sand-clay surfaces is inadvisable, the next step should be to the ultimate type of surface, that is, the paved surface. There are many questions of design which are reasonably matters for investigation, and there are varying local conditions which will make modifications of the present standard pavement types advisable. As used in this connection, the ultimate type refers to brick, Portland cement concrete, bituminous concrete and sheet asphalt wearing surfaces supported by adequate foundations. Speaking generally, and with a full knowledge of the fact that there are isolated exceptions to this general rule, the macadam types are now, because of the large expense in maintaining them, proving less satisfactory than such types, and there is sound engineering judgment in not advocating the construction of these pavements. At the present time there is the added incentive toward such construction that the transportation, materials and labor used should produce the most permanent results possible. As far as transportation is concerned, one way has been pointed out which makes use of existing equipment during the period of the year when it now stands idle. Also, if the increasing funds for highway improvements are more generally spent on the higher types of construction, it will relieve the producers of ordinary road materials of a heavy burden, and will enable them to develop their facilities for production fast enough to keep pace with the demand for their product. This relief will be enlarged if specifications are standardized which make possible the production of a lesser number of grades or sizes of the same material, and utilize all of the output practicable.

The more general adoption of the higher types of pavements will have an even greater effect on the labor supply. The construction of hard-surface pavements is increasingly a matter of machinery and equipment rather than of labor. To what extent this use of equipment can be carried is, perhaps, best illustrated by a concrete paving job on which less than 20 men were used in the whole process of unloading cars, carrying materials to the mixer, mixing and placing the concrete, finishing and watering it and in settling forms. Moreover, the men who were employed did not, in general, rate as unskilled labor. Indeed, most of them were highly skilled laborers and skilled mechanics. This job was a perfectly ordinary job, the rate of progress satisfactory and the work excellently done.

A project of this nature, beside making a relatively small demand for labor, has to its credit the fact that it has practically no effect on the local labor conditions. It does not use enough men to seriously affect a local labor situation, even if all of the crew had to be locally obtained. However, such a project as this one uses almost no local labor, because practically all of the members of the crew are highway skilled, and so must be obtained from the larger labor centers, where such men flock for re-employment as their jobs run out.

A further advantage on projects of this kind arises from the fact that the turnover is low. But even if it is higher than normal, as it has been during the past few years, the turnover merely involves a change in already skilled laborers. It does not, as in the lower types of pavement, involve the necessity of developing men who are wholly unfamiliar with this type of work.

Finally, as where the lower types of highway are involved, the present shortage of contractors can to an extent be relieved by seeking bids from responsible contractors who are familiar with related work. There are, for instance, a large number of contractors who are familiar with city paving who would make splen-

did highway contractors, and if this field should not provide all that are needed, there are numerous building contractors whose familiarity with the handling of concrete and with the development of construction organizations should make them very satisfactory contractors on highway work.

These men are, generally speaking, well equipped, financially responsible and thoroughly competent. To induce them to enter this field it will, however, be necessary to plan projects of a size sufficient to attract their attention and to eliminate all doubt from the specifications. Once these results are obtained, there should be no lack of competitive bidding, and the unreasonable increases in bid prices which are now threatened by reason of the fact that properly equipped highway contractors are fully employed should be avoided.

Summarizing the general highway situation, it would appear that (1) there is an insistent demand for better highways, which has resulted in the appropriation of enormous sums for highway construction; (2) that this demand should be met by the prompt construction of serviceable highways as rapidly as possible, but that (3) there are difficulties to be met in transportation, labor, materials and construction organizations which must be solved or the construction program will defeat itself by developing unreasonable prices, and, finally, (4) that the solution of the problem lies in the selection of types of construction which will throw the least possible strain on the weak points. If this is done, it is confidently believed that even higher rates of highway construction can be attempted with safety and with every assurance of success.

Wise economies can and will be made along the lines pointed out in this discussion in the utilization of rail equipment, the substitution of mechanical equipment for hand labor, the standardization of materials as well as in the design of pavements which will utilize every favorable local condition. But poor or inadequate construction must not be allowed to masquerade behind the shield of economy. So far as participation in the Federal-aid program is concerned, this Bureau will not become a party either to high cost economy of this character or in programs of construction so in excess of possible production that high prices rather than road production are secured.

Early Construction Planned on Big Sandy Highway.

Pikeville, Ky., January 24—[Special.]—An interesting good-roads meeting, attended by good-roads enthusiasts from all sections of Eastern Kentucky, was held at Ashland, Ky., January 20, and was presided over by Judge W. L. Watson, one of the wide-awake good-roads boosters of Kentucky.

Plans were discussed to begin early construction of the Mayo or the Big Sandy highway, which is to run from a point on the Virginia border line in Letcher county, coming via Jenkins, Pikeville, Prestonsburg, Paintsville, Louisa to Ashland, a distance of about 150 miles. It is expected that the next 12 months will see the completion of the all-important highway.

Lawrence county was the last county to vote bonds. Pike county will have several million dollars available, and surveys have already been made. It is said that contracts will be let within the next few days. Pike, being the largest county in the State, will build almost one-third of the roadway.

A similar through highway is in the working from a point at the end of this thoroughfare, on the Virginia border, down the Kentucky river, through the coal fields of that district via Whitesburg, Hazard, Jackson, Beattyville and other rapidly growing cities to Lexington, 200 miles. It is believed that arrangements will be completed for the actual beginning of construction of this highway during the present year.

Hard-Surface Highway Contracts Awarded.

Raleigh, N. C., January 21—[Special.]—The county of Pitt has let the contract for a hard-surface highway of 12 miles, from Greenville to Farmville, the latter being an excellent tobacco market. It will be 16 feet wide, monolithic, on a four-inch concrete base.

Nash county has let the contract for a 10-mile concrete highway between Rocky Mount and Nashville, part of the line to Raleigh.

Need for National System of Highways

By H. G. SHIRLEY, Secretary, Federal Highway Council, Washington, D. C.

Prior to the great development of the railroads there was a necessity for certain national highways to take care of interstate traffic, and especially was this demonstrated by the establishment of a national road, over which the products of the middle Mississippi Valley States could be transported eastward.

This necessity became so great that it led up to the projection of a national highway from St. Louis to Cumberland. This road was constructed through Maryland, Pennsylvania and Ohio, graded through Indiana, and surveyed through to St. Louis. At Cumberland it tapped the Chesapeake and Ohio Canal, and this waterway was used to transport freight from Cumberland to Georgetown, where it reached the navigable waters of the Potomac, and was distributed from there and Alexandria.

The people of Maryland, realizing the great advantage this would give to Georgetown and Alexandria, immediately set out to provide a means for securing a portion of this traffic and constructed a State road from Baltimore to Cumberland, connecting with the National Road at that point. This gave access over a highway to Baltimore in competition with the water route to Georgetown.

In the early days of the nineteenth century these roads served a great good and much benefit came to the people of Maryland through their construction. A large percentage of the traffic coming over the National Highway to Cumberland continued through to Baltimore and made that city a large distributing point instead of Georgetown.

We all know the history of the old National Road as soon as the great era of railroad development took place. The unit of power over the highway in those days was the horse or ox, and the distance that could be traversed in a day was limited to the endurance of these animals, and under normal conditions did not exceed 20 miles without a change of teams. This mode of transportation was naturally slow and expensive, and therefore, when the development of the railroads came along, traffic over the national highways practically ceased, and the necessity for national roads also ceased with the abandonment of traffic.

This condition continued until the late '90's, when many of the States, realizing the great cost that was being levied constantly, due to the small load that could be transported over mud roads, took up this important problem, placing it in the hands of the Agricultural College or Agricultural Department for study and a recommendation for its probable solution. It was soon discovered that the influence of the mud road on the development of the States and counties was more far-reaching than the most vivid mind had ever imagined.

It was found that the excess cost for carrying the products from the farm to market over unimproved roads ran into many hundreds of millions of dollars annually, and therefore became imperative that this great cost be reduced to a minimum. The States immediately took up this question of better roads and passed acts extending aid to the counties in assisting them to solve this most perplexing problem.

About this time there came into existence and fairly common use a new kind of vehicle, propelled by motor power, and capable of going quite a long distance without any restriction being placed on its physical endurance.

The development of the motor vehicle has been mushroom in effect, and it has come to the country almost over night, and today has reached a state of perfection and quantity that is revolutionizing the transportation of the world. With this great change in the vehicle and power used has come a greater necessity for better and more improved highways. The distance covered by the motor vehicle in a day exceeds by four or five times the distance that could be possibly covered by the horse, and therefore the availability and usefulness of the highway is increased in like proportion. To meet the new condition brought about by the change in the vehicle the States who were giving State aid to the counties immediately realized that it was very necessary to construct a main system of State roads so as to properly take care of the new vehicle in carrying supplies from the points of production to the points of consumption. It was not long before a number of States established a system of State highways and appropriated large sums of money for their construction, also continuing State aid to the counties in helping them master this problem from a

county standpoint. The extended use and number of vehicles increased more and more until it was recognized by the Federal Government that this question was no longer one that affected one State, but that the range that could be covered by the vehicle made it in a manner interstate traffic. The automobilist of one State very often used the roads in another State almost as much as those in the States in which he resides. This brought the National Government to the realization that to properly meet the great demand for better highways it would be proper and beneficial to assist the States with the construction of their State systems, and Federal aid was given to all the States.

We have seen how road development in a number of States has accelerated the use of the vehicle and what great prosperity it has brought to the counties and States where State highway development had taken place, the maximum use that is being made of the roads and the great service they are rendering the people at large. With this accomplishment in view it can be seen that the next step and the one that will produce the greatest benefit to the country as a whole will be the establishment of a national system of highways connecting up the large centers of production and tying the entire country together as a unit, forming a backbone of the main arteries, similar to our transcontinental railways. To this system the States can connect their highways, building out into the important producing centers and all the counties of the States, to which, in turn, the counties can connect with and build their systems out into every farming community, like the spokes of a wheel, touching every farm.

Such a plan would make a complete system, consisting of the main arteries being built and maintained by the Federal Government serving the country as a unit, a State system that would serve the State and be a feeder to the national system, and a county system that would feed the State system and reach out into every farming community, making a complete, practical and workable plan—a plan that would serve the highway transportation needs of all the people in the most efficient and expeditious manner.

Without the last step being taken by creating a Federal Highway Commission and establishing a national highway system there will be no guarantee that a connected system of roads in all the States will be realized, for it will take centuries under the present Federal-aid plan to accomplish such a result.

Each of the 48 States has one or more highway officials whose duty it is to look after State roads, but who have no opportunity or authority to make a study of the roads in the adjacent States that would serve the interest of both States in the most advantageous way. If two States were so fortunate as to have highway officials who would co-operate with each other and lay out a system of connecting roads, the term of these officials heretofore has been so short and fleeting that they would never remain a sufficient length of time to see their plans carried out and the fulfillment of the purpose which they had in mind. With two exceptions in the past, Massachusetts and Virginia (two cases in the desert of destruction), the term of the State highway officials in this country average from two to three years—just about a sufficient time to break a man in and get him so he will be efficient and able to render to the State a service that will be of maximum value. As long as such conditions exist the road problem of this country will remain unsolved, and it is beyond all human conception why the people allow such conditions to exist. With the change of administration, whether of different political parties or not, there is generally a clean sweep made of the highway officials. If a Federal Highway Commission is created, political influence or a change of party will not disturb or remove the commissioners who have become proficient by experience in handling the highway affairs of the country. The undisturbed tenure in office of the members of the Interstate Commerce Commission, Federal Reserve Board and others bear out this conclusion. It can therefore be seen that a great saving will be had by continuing in office men who will make this their life work and who will render the maximum service and who have become expert in solving the many varied problems that enter into road construction. The example of good construction and maintenance will also be of great value to the road officials of the States and counties.

The great lack of maintenance and the slipshod methods that

are commonly used cost the people millions of dollars annually. The commission handling national highways will render no greater service than demonstrating to the people and to highway officials at large a proper method of maintenance and a method that will be efficient in keeping the roads in constant repair. Such a method means a minimum cost in the long run and one that will give the maximum use to the user.

These are but a few of the economies and advantages that will come along with the construction of a national highway system, but the example of proper construction will be emulated by the States, counties, and even communities, to the betterment of road conditions. Some will say that the States can accomplish this same result without the nation coming in and interfering with their roads. We know that this is impossible, for how long and how efficient would any department of the Government now operating through the States function if it was divided up into 48 separate units over which there was no one in authority to co-ordinate or direct their efforts, or would there be any incentive on the part of any one of the 48 units to assist the other 47. Take, for instance, the Postoffice Department run in any such manner. You might be able to get your mail within a State, but what would happen to those who lived beyond its boundary. It is the opinion of the writer that no objection can be raised to the Postoffice Department and a number of other Government departments now operating in the different States. It has been done many years without any conflict between the Federal and State authorities, and we all know that the parcel post, the rural free delivery, the Public Health Service and many other agencies of the Government have operated in the States to the advantage and welfare of all. Likewise, the Federal Highway Commission can build roads, the main trunk-line highways of the State, without interfering or violating any of the functions of the State, and can aid the State in co-ordinating its system so as to make a plan of the entire road building of the country that will constitute a system of roads serving the maximum number of people with a minimum number of miles and carrying a maximum tonnage at the least per ton-mile cost.

These are a few of the benefits that will be derived from a national system, besides greatly lightening the burden that is now borne by the State highway departments and county road authorities.

It would be well for us to consider at this point the tasks that confront the people in regard to the road construction and development that must be undertaken in the next 15 or 20 years. There are over 2,500,000 miles of roads in the United States, 200,000 to 300,000 miles constructed of a material capable of carrying the traffic that has been developed and now passing over them. There is a need for about 60,000 miles of national highways and 250,000 miles of improved State highways, and 300,000 miles of improved county highway, leaving over 1,700,000 miles of unimproved roads, many of which are important and will have to be maintained and kept in condition for at least eight to ten months of the year. Others are of so little importance that a small sum annually expended will keep them in a reasonable condition and safe for traffic. The cost to improve the roads as outlined above, to take care of the earth roads and build proper bridges, will be about \$17,000,000,000. This is the problem that the people are expecting of those who have charge of the highways affairs of this country to properly take care of within the next 15 to 16 years.

Every agency now engaged in road construction, and every agency that may hereafter be created to undertake the improvement of our public highways, will have a big task to perform and one that will require the best brains, skill and energy of the nation to carry out this plan.

When we consider, however, the great amount of money that will be saved by the construction of such a system, the cost will be but a small item, for they will be paid for by eliminating the great cost placed on highway transportation by mud roads.

It was ascertained a number of years ago, when the density of traffic was nothing like it is today, that the annual additional cost to the nation for transporting its products over unimproved roads amounted to \$504,000,000. When we place on top of this the great increase there has been in traffic since that study was made by the Government and the saving in fuel by the improved types of roads now being built over those that were in existence at the time of this investigation, along with the great saving that would be brought about in recreational and passenger traffic, this

amount will run up close to \$1,000,000,000 per annum, and would pay for the cost of improving the roads in the plan above outlined.

We must not forget, also, that in estimating the great benefit that will be derived in dollars and cents there is another benefit in the influence they will have on the life of the people adjacent and who use these roads constantly in their daily pursuits in life. A good road not only brings better life into a community, but it enhances the value of all the property adjacent thereto and quickens a new spirit in the entire citizenship. This in a national system would extend from one end of the country to the other and tie the nation together as a unit. One section of the country would have easy access to the other, making it possible for the people of one State to visit those of another, from the East to the far-distant West, and from the North to the South, bringing them together in a social way and a fellowship that will tend to bind the nation closely together, making a people who will understand each other better, removing sectionalism and, above all, producing better citizens and guaranteeing a stable Government and Americanism that will mean the best for all, regardless of climate or class.

It has been said that a national highway system was in the interests of the tourist and that it would be of very little value locally. To one who has made a thorough study of this situation and knows traffic conditions, this objection is rather amusing, for the traffic over the national highway system will be made up of local units that will use these highways from the farming communities into the large centers of population, and whereas there may be a short stretch between these great centers of production that will not be used except by through traffic, yet the maximum mileage that will be built will be used locally and will be for local traffic. Granting that they were built purely for recreational and passenger traffic, they would, in the judgment of the writer, be worth even the price that they will cost, for there are now spent many millions of dollars annually on the other side of the water seeing the scenery of Switzerland and other countries, when equally if not more beautiful could be seen in this country if we had the proper highways to open it up.

There can be no greater benefit to the people at large than to open up the playgrounds, health parks and reservations of this nation.

The need for a national system is accentuated more and more each day, and as the country becomes more developed this great need will be more urgent.

With the many strikes and the unrest of labor and the possibility of the tying up of the railroads at any time makes an auxiliary system of roads necessary and imperative to guarantee the safety of the nation. If we had a system of highways leading to all the important centers of population, the life of the people could be maintained many days by foodstuffs being shipped over these highways in sufficient quantities to feed them all. From this standpoint alone and the safeguarding of the food supplies of the people, this system of roads should be constructed with the least possible delay.

These are but some of the problems that will be solved by a national system of highways for home and peace-time use, but should there ever come a time when this country would have to use them for defence and war usage, then they would form the bulwark and be the means by which an enemy could be resisted and pushed back at almost any point. The national roads of France, as all know, contributed about as much to the success of the war for the Allies as any other means used in the great conflict. And likewise, it has been the history of the ages. Due to the improved vehicle, the method of transporting war supplies and equipment has greatly increased the value of the road and its usefulness as a means for handling armies quickly and efficiently. It is the consensus of opinion of our soldiers who have returned from the other side that we should have a national system of highways, and they should be constructed at the earliest possible date.

Therefore, why should there be any objections raised, and why should the nation hesitate in laying out and constructing a system of highways that will be of great value locally, that will be of great State value, that will be of great national value, in time of peace, in time of internal strife, when other forms of transportation have been tied up, and when the country is threatened or invaded by an enemy.

Why wait and postpone the starting of a plan that will make the entire nation a vital and powerful unit?

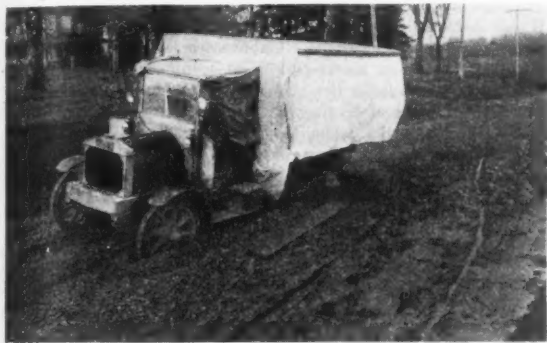
Motor Transportation and Our Highways — Making Past and Present Meet

By F. W. FENN, Secretary Motor Truck Committee, National Automobile Chamber of Commerce, New York City.

It has been said that when things have grown so old that they are almost forgotten they again become new and are adopted to meet our present-day needs. Transportation over the highways is one of them. It comes to us from the misty past. We have always held to the highways in a sense, but in our endeavor to modernize things we have neglected highway transportation to our detriment and almost, we might say, to our peril. In a way, this neglect has not been intentional, for the reason that in these days of rapid progress we have not had a proper medium to use over them until the advent of the motor truck.

County, State and nation had not considered it necessary to build permanent highways, as no great demands had been made for their use as lanes of commerce.

We have witnessed the opening up of the West by the prairie



BAD ROADS MEAN INEFFICIENT TRANSPORTATION. HERE IS A GOOD EXAMPLE.

schooner. We have seen how the waterways have served in building up a mighty nation, and how the railroad has transformed distance and has made us a homogeneous nation.

It is all in the march of events, and now, after centuries of neglect, we again turn to the highways for the proper solution to our transportation problems of today.

Rome could never have attained her pristine greatness without the aid of her highways. She could not have aspired to imperial domination of the world had it not been for the great military highways she had constructed, which brought remote parts within easy reach of the seat of empire, and which made the old saying "All roads lead to Rome" a true one.

Her highways were so well built that they have weathered the lapse of time and today stand as a monument to her everlasting credit.

We should build, as Rome built, a system of highways that will



PERFECT TRANSPORTATION CONDITIONS—GOOD ROADS. LOW HAULING COST, RAPID DELIVERY, MAXIMUM LOAD.

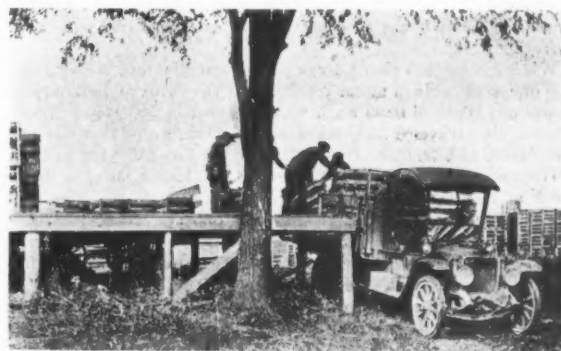
bear the burden of war when need be and carry the commerce of the world without a break.

Now that our efforts have been crowned with victory, we shall be called upon to supply the needs of the entire world, and we must not fall down on our duty. We entered the war because we knew it was our war as well as France's, England's, or Belgium's war, and now that we have seen it safely to a finish, we must go on and do our part in the rebuilding and take the place we have earned in the commerce of the world.

The motor truck has probably been the one greatest incentive for good roads. Unlike motor transportation in England and France, where our best roads would be regarded only as fair, the American development has been saddled with the burden of poor roads. To the American-made motor truck has fallen the extremely difficult duty of demonstrating to the highly practical business sense of the public its value and usefulness even under the serious handicap of poor roads.

How well it has succeeded in its task may be gleaned from the fact that today almost every State in the Union has passed or is seeking to pass legislation which will enable them to float a bond issue the proceeds of which are to be used in a good-roads program. The report of the Joint Congressional Committee of 1914 showed that the average cost of transportation per ton-mile on the highways of the United States was 21 cents. A reasonable improvement of all roads, at a cost of somewhat less than macadam construction, it was estimated would reduce the cost eight cents per ton-mile, while rock-surfaced roads, engineers stated, would cut the figure by two-thirds. Such a saving as this is sufficient in itself to justify an almost unlimited expenditure for road work, since not only does such a saving find direct reflection in the cost of goods of all kinds to the consumer, but it also stimulates the market for all kinds of goods.

All farmers, but especially those in dairying, should regard good



DIRECT SHIPMENTS FROM FARMS TO MARKET MADE POSSIBLE BY MOTOR TRUCK AND GOOD ROADS.

roads as an improvement investment. Of what benefit would modern, scientifically equipped cow barns, concrete milkhouses with the best equipment and utensils resulting in high-grade milk be if it could not be transported quickly economically? Of what benefit would tilling, fertilizing and crop rotating, resulting in increased crops, be if they could not be economically and at the proper time brought to market? The farmer cannot profitably produce perishable foodstuffs unless he can get them promptly to market. By a lack of good roads, which makes possible an easy and reliable means of sending small quantities of produce to markets, the farmers are discouraged from producing anything that cannot be sold in large quantities. Herbert Hoover, former Federal Food Administrator, stated that 50 per cent of the perishable food produced in the United States never reaches a market. If this statement is correct, it is not so remarkable that farmers as a group are not among the wealthiest in the country. How long could a manufacturer of shoes remain in business if he could sell only one-half of his output? There is constant talk these days of the high cost of living. How much could it be reduced if the unmarketed percent

age which is now permitted to rot in the field were put on the market and consumed? The agency that can reduce this enormous waste should receive every encouragement. The first step that farmers should take to solve their marketing problem is to work for good roads.

The benefits that follow in the wake of good roads as demonstrated by improved farm lands and buildings, from shiftlessness to progressive activity, better schools and churches, closer social intercourse, greater civic interest and better living conditions are of incalculable value. The Bureau of Roads of the United States Department of Agriculture has been teaching this lesson for years.



HAULING CATTLE FROM THE FARM DIRECT TO STOCK YARDS.

The interest that has been awakened by this and other good-roads agencies in good roads is best evidenced by the activities of nearly all States in promoting good-roads legislation and programs.

It is safe to say that no development of any period has been so rapid as the rural motor express, but good roads are essential if its expansion is to continue. It can only be economical where it has a firm foundation to carry it. It cannot be efficient when operating in mud.

When one realizes that a large part of our livestock is now going into our stockyards in motor trucks; that the yards at Indianapolis in one day received 6800 hogs, which arrived in 500 motor trucks. These trucks traveled 2500 miles, and their cargo for that day had a valuation of \$200,000. Over 462,000 came into this yard in 1918.

Hogs are going into the stockyards at St. Joseph, Mo., by motor truck at the rate of 1600 per day. Sioux City is receiving over 100,000 a year, while Omaha received 187,604 for 1918.

Wheat is one of the main food products on which we rely. Rapid and efficient transportation, with good roads, are prime factors in its production and distribution. The grain elevators at Louisville, Ky., have always taken care of the shipments received by rail, but since this grain has been coming in by motor truck they have been engulfed.

Motor trucks carrying grain are coming in daily from farms located in all directions, surrounding Louisville, in a regular avalanche from 7 A. M. to 7 P. M., and are feeding the elevators of Ballard & Ballard.

Wherever one goes large motor trucks are seen, sometimes on good roads and sometimes on bad, pushing on with an indomitable



115 SACKS WHEAT LOADED AND HAULED FOUR MILES IN 39 MINUTES.

will, patiently and efficiently bridging the gulf that has always existed in the transportation system of our country.

Transportation, to be perfect, cannot be operated along unitarian lines; it must be a trinity if all of our country is to be productive, and to be a trinity the highways must be made permanently hard and sound.

Away off in our hills and valleys lie buried our mineral and agricultural wealth, as well as our great forest reserves. If the spindles and machinery in our factories are to continue running, if our steel mills are to continue producing steel for the needs of commerce and building is to be allowed to go unhampered, those raw products must be extracted and shipped in all possible haste. In most cases our railways and waterways do not reach our sources of supply, and in times gone by horseflesh was the only motive power available.

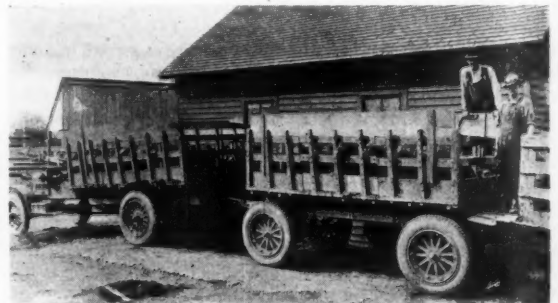
Today it is a different story. In our great logging camps motor trucks are hauling great logs to the sawmills, the great bulk of our cotton crop is finding its way to the steamboat's side, to the cotton gin or the railway freight house in these silent couriers of the highway, while the product of mine and field is being brought in from remote sections heretofore unproductive because the proper means of transportation were lacking.

If one could suddenly drop off at the logging camps at Lake Whatcom, Washington, 1213 feet above sea level a short distance from Puget Sound, an interesting scene would be unfolded. Here motor trucks are solving the problems of the lumberman.

In the mountains of Utah, where the railway never could find its way, motor trucks make a round trip from Price to Fort Duchesne, 160 miles in two days, at 10 cents per ton-mile. Through shipping by motor truck these operators save a 200-mile haul by railroad and river, while time has been greatly reduced.

But these are only remarkable instances in a most remarkable development that is taking place in our transportation history. As soon as it gets good roads to carry it into the highlands and lowlands it will get its proper stride, and then we shall outlive the great deeds of Rome when she held the destiny of the world in the hollow of her hand.

Rails will reach just so far, and no farther, but the highways,



RAPID AND DIRECT TRANSPORTATION OF HOGS TO MARKET.

with the motor transport and an efficient system of motor transportation, can and will bear any burden thrust upon them, for the highways are the natural arteries while the motor truck is the transportation medium that will bind us all together as a nation.

\$500,000 Yeast Factory for Dallas.

Dallas, Tex., January 26—[Special.]—The Fleischmann Company of Texas will build a large yeast factory near Dallas in the immediate future, it was announced here by Hugh Freer, general manager of the transportation department of the Fleischmann Company of New York and Chicago. Approximately \$500,000 will be expended for the initial factory unit. It is planned to expend \$1,000,000 for the site, factory, laboratory and equipment within the next few years, it was stated. The factory will be constructed so additions may be made from time to time.

A three-story building of large dimensions is planned. The factory will employ about 200 persons. The Dallas factory will be the twelfth plant of the yeast company in the United States and Canada. The nearest plant is at Chicago.

Southwestern headquarters of the Fleischmann Company have been maintained in Dallas for about 40 years, and this city has been the largest distributing point in the Southwest, Mr. Freer said. Growth of this section demands an additional factory.

Arkansas' Stupendous Road Program of \$100,000,000

By W. B. OWEN, Commissioner of State Lands, Highways and Improvements, Little Rock, Ark.

Arkansas! The name carries a new meaning in these days of progress and development. In the olden days, it must be admitted, the name was seldom mentioned by the uninformed save in derision, associated only with "The Arkansaw Traveler" and "The Slow Train Through Arkansas"; a State supposed to be easy-going, slow, careless and non-progressive, without ambition or natural resources; a State whose people were popularly supposed to live only in the present, forgetful of the past and careless of the future, whose whole conception of life consisted of "red licker," "coon skins" and "fiddles."

In the earlier days such yarns were told of Arkansas and readily believed by many because the people of the State, being independent and caring but little what the world might think of them, failed to deny the charges. Hence these fictions became fact to those who knew no better, and who had no disposition to learn the truth. Then came a new day. The people of Arkansas became conscious of their own powers and resources and developed a State pride which has, within recent years, effectually set at rest the slanders spoken and written against the State. The log cabin has disappeared and industry along the most constructive modern lines is taking possession of every corner of Arkansas and foreign capital is kindling the State with its rejuvenating energy.

In no particular has this new State policy been more thoroughly demonstrated than in the good-roads program. For years that consisted only in agitation, education, State conventions and resolutions, but now it is being realized in a definite way.

It is the same people, whom the uninformed have misunderstood and slandered, who have authorized, by general law and special act of the Legislature, the issuance of \$100,000,000 bonds for highway improvement; who are planning to construct 8500 miles of improved highway, forming a system connecting all-important points and all county-seats, as well as making connection with all trans-State national highways; who have a vision of the future years and possibilities, which causes them to unite in a systematic program for the construction of roads that will provide an adequate motor truck transportation for the development of the interior, and at the same time take care of all railroad congestion.

Of the 8500 miles of road, 3600 miles connect the county-seats and important urban centers and 4900 miles are laterals which serve as the connecting links providing transportation to interior sections not served by the railways. In laying out this program, through roads with interstate connections were given the greatest consideration, and the whole program is so planned as to be adequate for future years for generations to come.

In carrying out this program there is being issued more than \$100,000,000 in bonds, nearly all of which have been sold or bargained for and the money delivered on most of them.

This good-roads program is the most stupendous undertaking that has ever engaged the attention of Arkansas citizens. As compared with the work done upon our roads only a few years ago, the volume of work is amazing, and it appears to be only at the beginning. As stated before, there is now approximately a total of 8500 miles of improved highway under construction or in immediate prospect. On April 1, at the conclusion of the regular session of the Legislature, there was a total of 7055 miles in going projects, of which 5250 miles had been created by special act, the re-

mainder being under provisions of the Alexander law. Since that time districts have been formed under the Alexander law for 400 miles more. The extra session of September provided for 1350 miles, but this was all nullified by the action of the Supreme Court, which the January extra session has been called to remedy. There is now under construction, or provided for by contracts let, about 3000 miles, of which one-third, approximately, is under the Alexander law; 600 miles is of high-type asphalt surface construction.

The greater part of this improvement is paid for by the abutting property, but a very substantial aid is given by the State from the proceeds of its automobile license fund, and by the Federal Government through the Shackleford appropriation. The amount available from State and Federal sources for the five-year period ending April 1, 1921, is approximately \$6,000,000. This allotment was made April 1, 1919, of amounts available and in prospect, and was based upon the known mileage at the time, not taking into consideration the possibility of a largely increased mileage by an extra session, and consequently the creation of nearly 2000 more miles of road means a very small amount of aid possible to be rendered unless Congress should enact some of the pending laws providing additional appropriations. The amount provided by Government aid is relatively small when it is considered that the roads provided for will cost, approximately, \$100,000,000.

An erroneous impression prevails in some quarters that the State and Federal governments will contribute 50 per cent of the cost of the roads. This would be true if sufficient money were available for the purpose, which it is obvious is not possible under present conditions. The Federal law provides that the amount of aid on any given road cannot exceed 50 per cent of the cost, but, as a matter of fact, the mileage so greatly exceeds the available funds that it is not practicable to stretch the limited cloth to cover the entire area. The State aid is about one-third the Federal aid. The first appropriation by the State from the proceeds of the automobile license fund was \$496,000 for the biennial period 1917-18, and the Legislature of 1919 made an appropriation of \$950,000 for the ensuing biennial period. The annual amounts available under the Federal act are as follows: 1917, \$82,689; 1918, \$165,378; 1919, \$2,350,247; 1920, \$336,091, and for 1921, \$1,685,178, the latter amount not being available until after July 21, 1920, making a total of \$4,619,929.

There are 187 projects in the State, of which 81 have been approved for Federal aid. These projects cover all counties except Marion, Madison, Izard, Cleburne, Clay, Calhoun, none of which have received aid; also Saline, Pike, Hot Springs, Fulton, Drew and Ashley, none of which have been aided as counties, but which have received aid on inter-county projects. The only reason these counties have not been aided is that they have not perfected their projects and made application for aid.

These are facts that must be taken into consideration in the creation of new projects. There is now pending a bill making \$100,000,000 immediately available for road construction and an equal amount annually for the next three years. This measure was recently endorsed by the convention of State Highway Officials at Louisville, and should it be passed will increase materially the fund available for use in our State. The prospects for its passage are good, but should not be too implicitly relied upon.



SECTIONS OF CAMP PIKE HIGHWAY, NEAR LITTLE ROCK, ARK., COSTING \$25,000 PER MILE.

There is no one in the State more thoroughly committed to the good-roads program than I, and yet I am convinced that we should use common sense and be more deliberate in the creation of additional projects until greater progress has been made in completing projects already inaugurated. Not only the heavy tax burden justifies the admonition, but the excessive cost of labor and material entering into road construction and the comparative shortage of contractors and labor seem to me to make caution imperative.

There are 11 inter-county projects, to which aid has been rendered as follows:

Arkansas and Louisiana Highway, in Ashley, Drew, Chicot, Desha, Lincoln counties, 153.62 miles, \$300,000 allotted.

North Arkansas Highway District No. 2, in Fulton, Izard and Independence counties, 69.25 miles, \$144,649.30 allotted.

Little Rock and Hot Springs Highway District, in Pulaski, Saline and Garland counties, 62 miles, \$87,500 allotted.

Woodruff and Prairie County District, in Woodruff and Prairie

counties, 20 miles, \$12,500 allotted.

Howard and Sevier Improvement District, in Howard and Sevier counties, 15 miles, \$24,000 allotted.

Southwest Arkansas Road Improvement District No. 1, in Garland, Hot Springs, Clark, Montgomery and Pike counties, 60.55 miles, \$82,855.59 allotted.

Lincoln and Desha District, in Lincoln and Desha counties, 9.2 miles, \$7700 allotted.

Madison and Carroll District, in Madison and Carroll counties, 70.29 miles, \$40,000 allotted.

Prescott-Blevins District, in Hempstead and Nevada counties, 14.5 miles, \$8680 allotted.

Searcy and Van Buren District, in Pope and Newton counties, 26.23 miles, \$40,000 allotted.

Pulaski-Perry District, in Pulaski and Perry counties, 42 miles, \$21,250 allotted.

\$4,000,000 for Alabama's 1920 Road Program—State Bond Issue of \$25,000,000 to Be Voted Upon

By W. S. KELLER, State Highway Engineer, Montgomery, Ala.

Alabamians are determined to get their State out of the mud. To do this it has been found necessary to pass legislation allowing the people to vote on a constitutional amendment authorizing the issuance of State bonds. The 1919 Legislature was thoroughly awake to the necessity for definite action on this great question, and passed by only three dissenting votes the necessary enabling act. On February 16 next the election to determine whether or not there shall be issued \$25,000,000 good-roads bonds will be held. It is almost certain that the issue will carry by a very large majority.

The law requires that the proceeds from the sale of bonds shall be used in the construction of roads that connect the various county-seats, and that there shall be an equitable apportionment among the counties of the expenditures of both money and labor, and the time or times of making such investments, and the roads are to be constructed without expense to the counties.

In order to pay the interest on the bonds, create sinking and maintenance funds, the entire net revenue received by the State from licensing of motor vehicles will be used exclusively.

It has been shown that the bonds can easily be retired serially, beginning in 1924 and completed in 1941, and ample funds left for maintenance. At first glance this might appear to be unfair to the automobile and truck owner. If the owners of motor vehicles felt that this was true, they unquestionably would oppose the issue. On the contrary, they are practically unanimous in the support of it and are financing the campaign. They realize the vast saving to be gained in fuel and wear and tear on machines over a system of good roads compared to the present system of mud roads.

It is the purpose of the State Highway Commission to construct modern roads—roads that will sustain the traffic of today and the estimated traffic of tomorrow. This means that the

major portion of the system will be of the very best material available. It is estimated that 2500 miles of modern road can be constructed for \$50,000,000. The expenditure of the fund will cover a period of twelve years, and it is confidently expected that the Government will from time to time make additional appropriations, thereby giving Alabama, including the present allotment of \$5,700,000 as much as \$25,000,000.

During the present year it is planned to contract, if possible, \$4,000,000 worth of work, one-half of the cost to be paid from the Federal aid fund.

Alabama's plan is modelled after that of the State of Illinois, and is unquestionably practical.

Jacksonville Awards \$263,619.73 Paving Contracts.

Municipal paving contracts aggregating \$263,619.73 at Jacksonville, Fla., were awarded last week to J. Y. Wilson of that city. Various streets and avenues are to be paved with vitrified brick on concrete base and vitrified brick on cement and sand, with granite curb.

Oklahoma Road Contract Awarded at \$390,500.

Contract for Muskogee County road construction to cost \$390,500 was awarded last week to the Froebe-Briscoe Construction Co. of Muskogee, Okla. This contract calls for the construction of 30 miles of gravel highway.

\$500,000 Building for Standard Oil Co.

The standard Oil Co. will build a six-story office building in Baltimore at a cost of \$500,000. The architect is Clyde N. Friz.



RE-ENFORCED CONCRETE HIGHWAY BRIDGE NEAR MONTGOMERY, ALA.

Permanency the Keynote of Florida's Program

By J. P. CLARKSON, Secretary State Road Department, Tallahassee, Fla.

Permanency will be the keynote of highway construction in Florida during the year 1920, for the State Road Department has gone on record in favor of three types of surfacing material, each of which it is believed will prove equal to the demands of traffic in this State for many years to come.

The materials upon which contractors are invited to submit bids are grouted brick, concrete and bituminous macadam. Where brick or concrete are selected the surface of these materials is to be nine feet in width, with rock shoulders three and one-half feet in width on each side of the surface, making a road 16 feet in width. Where bituminous macadam is selected the surface is to be 16 feet, with a concrete curb. The base of this latter type is to be five inches in depth, with a three-inch top. Bids were invited for 54 miles of these types of road to be opened January 14, and it is planned to open bids for approximately 100 miles to 150 miles additional before the end of the month of March.

While it is estimated that roads of the classes named will cost approximately \$20,000 to \$25,000 per mile, including drainage structures, this cost may be somewhat lessened through the State Road Department being able to supply contractors with a force of laborers who will always be "on the job," without any possibility of strikes or walkouts. These laborers constitute the State road force of Florida, which on January 1, 1920, was augmented by the addition of something more than 500 able-bodied State prisoners who have heretofore been under lease to firms and corporations engaged in the manufacture of naval stores.

The abolishment of the convict lease system and the placing of all State convicts capable of road work under the supervision and control of the State Road Department works a new era in road construction in Florida. The entire State convict road force, consisting of approximately 650 men, is now engaged in clearing and grubbing rights of way for State roads which are included in the 1920 program for hard surfacing.

The program includes State Road No. 1, extending westward from Jacksonville to Lake City, where it intersects State Road No. 2, which begins at the Georgia State line and extends southward along the backbone of the State, connecting with the paved roads leading in all directions in Lake, Orange, Osceola, Polk and De Soto counties.

State Road No. 3 is also included in the hard-surfacing program. This extends from Jacksonville along the St. John's River through Putnam, Volusia, Seminole and Orange counties to Orlando, where it connects with State Road No. 2.

State Road No. 4, the East Coast route of the Dixie Highway, the Old Spanish Trail, the Montreal, Quebec and Miami Highway, the John Anderson Highway, is also included in the 1920 program. The State Road Department has apportioned funds for the

hard-surfacing of Road No. 4 from the Georgia State line, south of Waycross, Ga., in Nassau county, and also for the surfacing of several missing links in Flagler, Brevard and St. Lucie counties.

Other roads which are included in the program for 1920 include State Road No. 5, from High Springs to Sarasota, on the Gulf coast, through Alachua, Levy, Marion, Citrus, Hernando, Pasco, Hillsborough and Manatee counties; State Aid Road No. 7, from Arcadia eastward through Okeechobee City to the Atlantic coast at Fort Pierce, and State Road No. 1, in several counties between Lake City and Pensacola.

It is estimated that the improvement of State Road No. 1 between Jacksonville and Lake City will cost approximately \$1,500,000; west of Lake City the contemplated improvements will approximate \$3,000,000, but not more than \$1,000,000 is included in this year's program.

On Road No. 2, at least \$2,000,000 is to be expended in improvements under the supervision of the State Road Department.

On Road No. 3, the expenditures will amount to approximately \$1,000,000.

Road No. 4 will receive State and Federal aid to the extent of approximately \$850,000, and the counties traversed will expend at least \$1,500,000 in addition thereto for road improvement, not including an additional \$1,500,000 for a highway bridge across the St. Johns River at Jacksonville.

On the other roads included in this year's program it is estimated that at least \$1,000,000 of Federal, State and county funds will be expended under the supervision of the State Road Department, and the various counties will expend an additional sum of \$3,000,000 for the improvement of roads other than those included in the program of the State Road Department.

As to the extent that these highways are being used by the people of the State, that is a subject that should be dealt with separately by some of the automobile associations or commercial organizations. The State Road Department has made no attempt to secure data as to vehicular travel other than over sections of road upon which Federal aid is to be applied. Data secured justifies the statement that improved roads increase traffic within six months more than 300 per cent.

Tourist travel is one of Florida's assets, and the mere announcement of the improvement of roads in any one section of the State causes a rush of travel to that section that is almost beyond belief. The great increase in travel of all kinds, and especially of motor trucks and the passenger motorbus type, is the cause of the demand for a permanent type of paving.

In the future the policy of the State Road Department will be to build roads wide enough to accommodate the traffic, even at the cost of cutting down the mileage to be constructed with the funds available.

Georgia Adopts Definite Highway Program: \$12,600,000 Available in 1920

By C. M. STRAHAN, Chairman State Highway Board, Athens, Ga.

It seems assured in the light of highway legislation passed by the General Assembly during the summer of 1919 that the people of Georgia have at last turned their attention seriously to the solution of highway transportation.

Justly claiming to be the Empire State of the South by virtue of wealth and resources, Georgia has nevertheless experienced in road matters some of the troubles of the old woman who lived in a shoe. With a family of 157 counties, and with a State Constitution vesting full control of the public roads in the counties, she has felt the constrained quarters and the multiplicity of Children in a very real way.

It has required years of patient waiting and of convincing experience to enable the State to break loose from the county unit idea and to realize that highway transportation is too large a factor in the State's progress to be limited by county lines, and that the burden of paved highways to form an interconnected net-

work uniting county-seats and other important market points needs the united strength of the State as a whole to accomplish the best results.

Under the strong leadership of Governor Hugh M. Dorsey, and supported by the deep interest of the entire membership of the General Assembly, it was found possible last summer to enact vigorous and clear-cut highway laws, which reorganize and enlarge the functions of the State Highway Department, which provide a reasonably large income from motor-vehicle licenses, and which call for the designation and construction of a system of main trunk roads, comprising 4800 miles, to connect the county-seats and market towns. This network is to be designated by the State Highway Department, and gradually taken over by the State for construction and perpetual maintenance.

The terms of the law are definite and liberal, giving wise discretion to the board and the engineering staff, but protecting the

interests of all parts of the State in the annual expenditures of the funds provided.

The funds are allotted to the twelve Congressional districts in the ratio of the State road mileage in each district to the entire 4800 miles of the State system. The funds are raised by an increase of the motor-vehicle licences based broadly on a charge of 60 cents per horse-power for passenger vehicles and \$15 per ton capacity on motor trucks. The fees for trucks above four-ton capacity are set at much higher rates to discourage the use of unduly heavy trucks. The anticipated income in 1920 is estimated at \$2,000,000.

A part of the legislative program embraces the submission of constitutional amendments to popular referendum, whereby the inhibition now existing against the issue of State road bonds will be removed. A large issue of such bonds is contemplated when these amendments are ratified. The State Senate has acted favorably in this matter, and concurrent action by the House is anticipated next June. If approved by the General Assembly, these measures will probably be voted on in November, 1920.

The new Highway Board assumed office in September, succeeding to the previous State Highway Department, which since 1916 had supervised the distribution of Federal funds allotted to Georgia. Notwithstanding the very limited support given to its predecessors, the new board fell heir to their faithful efforts and has been able thereby to place under construction a large number of Federal-aid projects where county funds have been used to meet the Federal allotments. More than \$5,000,000 of such work is now under active construction and under contract in the State.

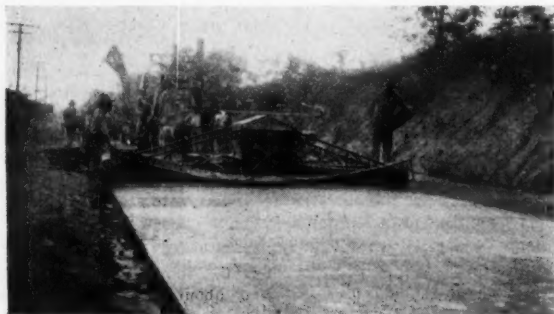
The last monthly report of the State Highway Department carries the following record of Federal-aid projects:

		Value.
Projects actively under construction.....	52	\$4,482,450.24
Projects under contract.....	6	393,718.20
Projects approved and ready for contract.....	14	1,127,873.59
Project statements approved.....	36	3,298,752.78
Project statements pending.....	13	654,005.06
Total number live projects.....	121	\$9,866,799.90
Projects to be submitted later.....	13	351,062.12
Total.....		\$10,227,862.02

	Miles.
Paved roads.....	174.92
Sand-clay roads.....	577.32
Graded roads.....	28.50
Total mileage.....	780.29
Bridge projects.....	25

During 1919 the various counties of Georgia have shown a most vigorous activity in raising road funds by the issue of county road bonds. The record shows that 46 counties have issued \$16,730,000 of such bonds.

These issues were mainly inspired by the prospect of Federal aid, and most of them are limited by the condition that county money shall not be expended until met on a fifty-fifty basis from Federal or State funds. Hence this large sum will be spent gradually when State and Federal funds become available to meet the county expenditures. Based upon this situation, the State Highway Board will probably continue to allow all Federal aid allotted to Georgia to be met by county funds, and will likewise permit the counties to match a portion of the State funds on a similar fifty-fifty basis in certain cases where the counties desire to do so.



CONSTRUCTING A GEORGIA CONCRETE ROAD.

The maximum construction program for 1920 would in this way carry the following possible expenditures:

Federal-aid projects from funds arising prior to the current fiscal year, already matched by county funds	\$5,200,000.00
Federal-aid projects from 1920-21, allotment to Georgia when matched by county funds in equal amount.....	5,400,000.00
State-aid projects from 1920-income when voluntarily met by county funds.....	2,000,000.00
Total maximum funds available in 1920.....	\$12,600,000.00

It is probable that the policy of the State Board will be to concentrate the bulk of its resources on portions of the 4800 miles of State road arteries in the several Congressional districts.

With the above liberal supply of available finances, it is to be regretted that present conditions embrace such serious problems arising from the labor, transportation, material and price situation.

The supply of available paving material is limited and prices correspondingly high. The question of car shortage seriously affects delivery and has rapidly increased unit prices bid. The number of well-equipped and capable contractors is relatively small. Bonding companies are reluctant to furnish bonds unless profit margins are high.

All of these factors, underlaid as they are by labor shortage and increasing wage demands, combine to profoundly influence the policies and performance of State Highway programs. The point has already been reached where doubt must exist whether the public can secure anything like a fair return in transportation value and road mileage from the large expenditure per mile required, and whether a policy of reduced activity until the present abnormal conditions are softened, is not the logical course in good faith to the taxpayer. These conditions are prevalent in all the States. No enterprising State wants to mark time in this vital matter of road-building, and will not do so except under the strongest economic pressure.

The Georgia officials are seeking relief from such pressure along several lines:

1. A large percentage of the State roads stand in need of widening, regrading, drainage and relocation. These items are the most essential and permanent elements in road investment and require relatively small expenditure. The betterment of such roads can be separated into the preparatory stage with the use of temporary surfacings, such as sand and gravel, to be followed later by the permanent paving stage. Emphasis can be laid on such preparatory work in 1920, much of which can be executed by local parties with local material.

2. The situation seems to justify wise experiment with less expensive paving types. For instance, a foundation of firmly consolidated sand and clay confined by curbing and kept thoroughly dry by tile sub-drainage might be expected to furnish the necessary strength to carry the weight and impact of the traffic if protected by a smooth waterproof wearing coat. Sand-clay roads have shown remarkable strength under dry conditions, bearing loads of 30,000 pounds carried on four-inch steel tires without indentation. If such material can be kept permanently dry, there seems to be a very fair prospect that it would furnish adequate foundation strength. There exists in Florida some very promising examples of roads built in this way at low cost with asphaltic wearing coats, which are showing excellent durability.

A very fundamental relief to the highway problems of both the present and the future would come if in some way the local and sub-grade material existing along the roads could be successfully



BUILDING A MODERN HIGHWAY BRIDGE IN GEORGIA.

utilized to furnish adequate foundation strength to safely carry the wearing coat and the traffic loads.

3. It is felt that a very considerable part of the current charges for road building springs from the nature of the usual competitive contract, whereby the contractor must carry all the risk. Under present conditions such risks are so abnormal that few contractors can safely bid on a reasonable cost basis. It is believed that contractors would welcome a new form of contract in which such risks are largely shared by the owner, and that the cost of construction thereunder would be greatly lowered.

With this in mind, Georgia officials will try out during 1920 a modified form of cost-plus contract which seeks to retain the competitive element required by basic State laws, and to greatly reduce the risk of the contractor in the premises.

4. The impression is current in Georgia that a considerable increment of cost is now arising from the difficulty that contractors have in securing surety bonds. It is intimated that such

increments must be added to estimates already liberally figured in order to meet the requirements of the bond companies. The new contract seeks to relieve in great part this difficulty by reducing the amount and somewhat changing the character of the bond required.

5. The situation has also served to justify the State Department in directly undertaking the construction on force account of one 20-mile project. This has been made possible by the co-operation of the Prison Commission, who, under the law, can furnish a quota of convict labor for the purpose. The plan is purely an experiment to hasten the building of a more important link and to furnish comparative cost data bearing upon the actual profits involved in contract prices now demanded.

6. Encouragement is being given to the local development of quarries, gravel and sand deposits, and efforts will be made in the spring and summer to secure advance delivery of heavy paving materials while open cars are most available.

Future Road Work in Kentucky

By WILLIAM N. BOSLER, Road Engineer, Department of Public Roads, Frankfort, Ky.

At the present time it is rather difficult to state just what the future policy of this department will be, because many of the present road laws may be changed by the General Assembly which will meet in January, 1920. This being the case, only the program, laws and policies as outlined and recommended by the present department can be given, and these must be subject to the changes which the incoming Legislature sees fit to make.

Like many other States, Kentucky has expended millions of dollars on the construction of water-bound macadam roads. In 31 counties of central Kentucky alone you will find 8400 miles of this type. While this includes secondary roads, or rather roads which are classed as secondary under the present law, which establishes a primary or State-aid system composed of all roads connecting county-seats, still many of these secondary roads receive as much traffic as the primary roads, and hence must receive the same class of construction. It is evident to an engineer, or, in fact, to anyone who has observed the effect of motor traffic on water-bound macadam roads, that this type of surface cannot withstand wear caused by the modern traffic which the advent of motor-drawn vehicles has produced in the rich farming and mining sections of this country. It is evident that in many sections it is impossible to maintain a water-bound macadam surface under such conditions, even where the utmost care is taken, to such an extent that its life will justify the original cost. It is also evident that a surface must be maintained in order to prevent the loss of a base which has already cost the taxpayers of Kentucky millions of dollars.

The department has tried surface treatment both of tar and asphaltic oil on some of these roads, and although it was found that such a carpet preserved the life of the road for a few years, still new construction built in anticipation of such treatment could not be recommended by the department; therefore, the primary roads must be surfaced with a bituminous material or reconstructed of some permanent type if much progress is to be made in road building in this State.

Before the war the average cost of resurfacing a 16-foot water-bound macadam road was \$2000 or \$3000 per mile. At present the cost of construction of this type has advanced from 100 to 200 per cent, but the road fund has not, in most instances, increased over 50 per cent, and in many counties it is practically no larger than it was before the war. It is evident from these facts that a radical change must be made in our road system, even if we desire no more development in highway construction, but only wish to save the money we have already invested.

The Federal Government proposes to aid in the construction of rural postroads if the State will pay half of the cost of construction. To this end over \$5,000,000 have already been apportioned to Kentucky, \$2,000,000 of which must be under contract by the 30th of June, 1920. It is true that a few contracts have been let, and surveys are being made which will require in construction a large part of the \$2,000,000, but the money to finance the counties' share of the cost was not derived from taxation, in many cases, but from private subscription.

If Kentucky intends for the development of her highways to keep pace with the development of her natural resources, she must create a new State highway system and a larger road fund.

Under the present system there are 6000 miles of primary roads

in this State. While the traffic on some of these does not warrant the construction of a high-type road at present, if we are to judge the increase of the traffic in the future by the increase of the last 10 years, and intend to construct a type of road which will carry it at a minimum maintenance cost, it will be necessary to construct a type higher than water-bound macadam. Consider, then, the cost of the construction of this system if we build a 16-foot bituminous surface even of penetration, which is the least expensive of the higher type roads, this surface will cost between \$10,000 and \$15,000 per mile, and there are many miles which must also be graded and drained at a cost ranging from \$20,000 to \$30,000 per mile. Consider, then, that the average cost per mile will be \$25,000, which is a very conservative estimate and the total cost of construction for this system will be \$150,000,000.

Under the present system this might be completed in 50 or 60 years if nothing was expended on maintenance, but long before that time the roads which were first constructed would be in an impassable condition and a completed system would never be obtained. The commissioner therefore proposed the following changes:

First—That a primary system of State highways, that will give each county at least one main thoroughfare, be laid out by the road department to the best interest of the county and State, and designated by the General Assembly, and that all State and Federal money hereafter be used on this system until its full completion in each county, before a lateral line is taken up; that the cost be borne principally by the State and Federal governments and maintained by the State. The construction of this primary system will produce continually in a few years, and will reduce the mileage from 6000 to a possible 2500 miles, and at the same time give a system far better adapted to the need of the people and the development of our resources in a much shorter time than attempting the construction of the entire inter-county-seat system. It being understood that in laying out this system the road department would make use of the present Federal-aid projects that have been designated in this State.

Second—That the surveying, construction and maintenance of this system be placed under the road department, and the commissioner be held accountable for this trust.

Third—That there be levied and collected, in lieu of the present three cents, a State road tax of 20 cents on all property on which the State now collects taxes. That in lieu of an ad valorem and all other tax now paid by automobile owners there be collected a horse-power tax of 75 cents on each horse-power, this applying to all pleasure cars only, and that in addition to this, motor trucks and commercial vehicles be required to pay \$1 per hundredweight up to three tons and \$2 per hundredweight above that.

That a land tax ranging from \$1 to \$4 per acre be placed on all land abutting the road contiguous thereto for one mile on each side. That 50 per cent of this tax be placed on all lands over one mile and less than two miles from the road.

These taxes will produce about \$7,000,000 a year, and, taken with Federal aid, will give a fund of about \$9,000,000 to be expended on the construction of this system, which will be sufficient to construct the system as outlined in eight or nine years.



THE TRINITY OF TRANSPORTATION—WESTERN MARYLAND RAILROAD, STATE HIGHWAY, CHESAPEAKE AND OHIO CANAL, AND POTOMAC RIVER VISIBLE THROUGH TREES. TELEPHONE AND TELEGRAPH LINES PARALLEL TO HIGHWAY.

Maryland With \$30,000,000 Present Investment in Highways Now Plans \$30,000,000 Extension

By FRANK H. ZOUCK, Chairman, State Roads Commission, Baltimore, Md.

Maryland is one of the country's pioneer States in building a modern State highway system. It has invested in this system over \$23,000,000 in what is known as State roads and over \$6,000,000 in State-aid roads, making all together nearly \$30,000,000 for a system of highways that is conceded to be one of the most complete and comprehensive in the country. This investment of nearly \$30,000,000 for Maryland's highways represents more money per capita per area and per wealth spent for roads than that expended by any other State in the Union.

Maryland's roads system has also had a tremendous influence upon advancing and encouraging the construction of modern highways throughout the United States. This has been due to the fact that Maryland surrounds the District of Columbia, and members of Congress coming from all parts of the country have had an opportunity of riding over these roads and learning about Maryland's system at first hand, and they have carried back home with them the benefits of the lessons learned and thus stimulated and brought to actual fact the improvement of roads in their respective communities.

Even with the fine system of roads which Maryland has secured, it is thoroughly realized that methods of highway construction are changing all the time, due to changing traffic conditions. With the development of motor-truck transportation there has come conditions which are very different from those of horse-drawn traffic, and these have imposed new requirements to take care of this modern method of transportation. Maryland fully realizes, therefore,

the need of so changing and modernizing and extending its present system of highways so they will stand up under this new traffic and be prepared to meet every demand that will be placed upon them.

With this thought in mind, an entirely new program, looking broadly to the future, has been recommended and will very likely be adopted. This plan will provide for a system whereby \$30,000,000 will be available for road work in the next 10 years, to be spent at the rate of \$3,000,000 per year. Maryland will receive on the average of \$750,000 a year of Federal-aid funds, which the State will match with an equal amount, making \$1,500,000 a year for Federal-aid roads. Then it is planned to provide a new system of funds for the building of lateral roads and under this plan \$750,000 will be provided by the State to be matched by an equal amount by the counties, making a total of \$1,500,000 for this type of road.

Under this proposed plan the funds provided will cover the cost of building 25 of the most important bridges on the State highway system in the period of five years; it will build through all incorporated towns within 10 years and will give the smaller counties an average of approximately 30 miles and the larger counties 50 miles of improved roads, in addition to those which they now have. It will widen all the State's main roads from 14 feet to 17 and to 20 feet, and will place 90 per cent of the population in the counties in touch with a State road, and will complete a system that will satisfy the most enthusiastic advocate of modern highways.

Under the Maryland law the funds received from motor vehicle



BALTIMORE TO WASHINGTON BOULEVARD. THREE-FOOT CONCRETE SHOULDERS RECENTLY ADDED, MAKING 20-FOOT HIGHWAY.

licenses are devoted to highway maintenance, which also includes the reconstruction of roads that have become worn. It has been the principle of this State to invest the State funds in new roads only, leaving to the motor vehicle fund to provide for the rebuild-



SASSAFRAS RIVER BRIDGE, MARYLAND. GOOD EXAMPLE OF HIGHWAY BRIDGES BEING BUILT BY ROAD COMMISSION.

ing of such roads where this is necessary and the constant, thorough maintenance of them.

One of the important things which Maryland is doing at this time is to widen and strengthen the roads in its present system. This has become necessary due to modern heavier traffic conditions, and the State has wisely determined to reinforce its roads so they will stand up under this traffic. A general plan has been adopted



BALTIMORE PIKE, NEAR CUMBERLAND, MD. MACADAM, SURFACE TREATED. POLES AND CULVERTS WHITE-WASHED TO PROTECT TRAVELERS.

of building the main State highways 20 feet wide, and those next in importance 17 feet wide. This extra width is being secured by building concrete shoulders on either side of the road. Ultimately the center of the roadway will be rebuilt as the road becomes worn, or where traffic conditions require a heavier pavement.

The cost of the work of widening and reconstructing these roads in which the State has already made its original investment will be met by drawing upon the motor vehicle maintenance fund referred to, and it is likely that this fund will be slightly increased to meet the additional costs that will be necessary to bring these roads up to the point where they will stand up under heavier traffic.

From a close observation and careful study of road conditions in Maryland, it is my opinion that no type of road can be built that will not become worn out or obsolete in 20 years under changing and increasing traffic. Therefore, I believe that no road bond



MILE AND ONE-HALF STRAIGHT-AWAY VIEW REISTERSTOWN ROAD, MARYLAND—A 17-FOOT CONCRETE HIGHWAY.

issues should be made for a greater period than the life of the road, and never for a period of longer than 20 years. In my opinion, Maryland has been fortunate in having a law which limits the length of terms of bond issues to 15 years. The result of this has been that all of Maryland's bonds for road work have been paid off before the roads have become worn out or obsolete.

In the light of my experience, I feel that any other method of raising funds and applying them is wrong in principle, and if such a policy should be continued it will lead to bankruptcy.

Mississippi Making Great Strides in Highway Improvements

By XAVIER A. KRAMER, State Highway Engineer, Jackson, Miss.

In the last several years vast strides have been made in the improvements of the highways of Mississippi, and much money has been expended in the construction of good roads. Not as much has been done as would have been had the nation not been forced into the war with Germany, which caused a shortage of labor and materials and transportation facilities, but our program in road work in spite of all difficulties has been remarkable.

At present there is a large amount of money available for road construction, and we are standing on the threshold of an era of road building and State development that was not dreamed of a few years ago.

It is calculated that the counties of the State have on hand approximately \$15,000,000 for road construction, much of which is under way. These funds, together with the amount of Federal aid available for road construction, is evidence of the fact that an adequate State Highway Department must be maintained to assist the counties in the expenditure of this vast fund and to administer the Federal-aid money. At present the State Highway Department is handicapped by the lack of sufficient personnel to do the work it is called upon to do.

However, a recommendation has been made to the Legislature to materially increase the working forces of this department, and if the budget submitted is approved, adequate facilities will be available for carrying on all road work, both within the State and for co-operation with the Federal Government.

There is also before the Legislature a \$25,000,000 bond act

which has been recommended by the State Highway Department and the Mississippi Highway Improvement Association. The plan proposed under this act embodies the following principal features:

1. It provides for the construction and maintenance by the State Highway Department of a State-wide system of hard-surfaced roads connecting all county sites and principal towns.
2. It provides for the serial issuance of \$25,000,000 of State bonds during a period of 10 or 12 years and provides for redemption of the bond issue within 20 years from the date of the issuance of the bonds, the bond issue to be predicated on a motor-vehicle tax.
3. It provides for the creation of a "Motor Vehicle Road Fund" in the State Treasury, into which will be paid the motor-vehicle license taxes, and into which may be paid a gasoline tax and other moneys. Out of this fund the bonds and interest thereon will be paid. This fund will also provide the cost of the maintenance of the roads.
4. It provides that the proposed State-wide system of roads, or any part or parts may be constructed, or constructed and maintained, in co-operation with the Federal and county funds.
5. Provides and insures that adequate provision be made for the proper maintenance of all such roads constructed.

If the Legislature passes bills as recommended by the Mississippi Highway Improvement Association, it will not be marking an unblazed trail nor following an unbent path. Many States have and are issuing bonds under the plan proposed, notably

Illinois, which State has provided for a \$60,000,000 bond issue along the same lines.

The bill provides that the money shall be apportioned equally among the counties, which means that each county of the State will receive approximately \$350,000 of the State Bond Fund. In addition to this, a similar amount of Federal aid will probably be available during the period of construction, so that if the bill is enacted into law a State-wide connected system of hard-surfaced roads is within easy reach.

Mississippi's allotment of Federal aid for 1920 is \$1,709,027.70, and for 1921 it is \$1,807,557.17.

Under Federal aid 23 projects are under construction at an estimated total cost of \$1,428,000. Plans have practically been completed or are ready for approval and the letting of contracts upon advertisement for 22 projects at an estimated total cost of \$3,029,000.

As will be seen, Mississippi is making plans for extensive and comprehensive highway development, and with the additional funds for broader authority secured from the Legislature there is no question but that the State will within a few years have an adequate and efficient system of highways.



GROUP OF MOTOR-TRUCK EQUIPMENT DONATED TO MISSISSIPPI BY WAR DEPARTMENT.

Missouri Votes Millions for Durable Highways

By ALEXANDER W. GRAHAM, State Highway Engineer, Jefferson City, Mo.

The end of 1919 found Missouri enjoying the greatest road-building movement in her history. Counties and road districts had voted \$18,112,000 in bonds for the construction of State roads in each county with State and Federal aid. As a result of the bond activity the State Highway Board had approved applications for 734.67 miles of hard-surfaced road, which, when completed, will cost a total of \$10,226,646.34. The Bureau of Public Roads having H. H. Lotter, a resident engineer located at the State capital at Jefferson City to pass upon Missouri projects, these applications had been rushed to Washington, and 49, with a total mileage of 459.29 miles, and a total estimated cost of construction of \$5,948,910.83, had been approved.

Missouri, except in isolated districts, had been doing little but talk good roads before the beginning of 1919. The close of the war found the whole country in the mood to build roads and develop the country's resources, and the last Legislature, by passing a new road law, gave Missouri an appropriate vehicle for a great road boom. The general approval and working success of the law has been gratifying to Governor Gardner, who has been constantly pleading for good roads since he was elected and generously helping forward the present movement.

The new law authorizes the building of not less than 50 miles of State road in each county, which shall connect with the State roads in adjoining counties. On this mileage each county receives \$1200 a mile free, provided the county pays for the surveying. Half the cost of building a durable road above \$1200 a mile is borne by the State and Federal Government and half by the county.

The law guarantees that each county shall receive not less than \$60,000 in State and Federal aid on 50 miles of State road. But if a county cannot build a durable road that will take care of local traffic and preserve the original investment with \$1200 a mile, and the county refuses to finance the cost above \$1200, the State Highway Department is authorized to cut the mileage and build as many miles of durable road as possible with the \$60,000.

This law gave a new impetus to durable road building in Missouri. There was started a movement in almost every county in the State to vote road bonds to build the mileage authorized in each county.

The new road law went into immediate effect when Governor

Gardner signed it March 17. But in spite of the fact that it took some time to acquaint the counties with its true provisions, certain portions of the public press having put forth the impression that it was a mud-road law, the amazing total of \$18,112,000 had been voted by the end of 1919, and petitions were in circulation asking county courts to set elections for an additional total of over \$15,000,000. A majority of these elections will be set for January, February and March.

Most of the counties that have not yet done so are striving to finance their two roads and build something more substantial than \$1200-a-mile roads. There have been bond failures, but the road boosters in the unsuccessful counties keep on trying, a failure merely spurring them on to greater efforts. With the bonds already voted and the proposed issues in sight, the indications are that most of the counties will have their two State roads financed early in 1920.

During 1917, 1918 and 1919 Missouri completed 480 miles of road with State, Federal and county aid. Of this mileage 90.8 was of gravel, 25.6 of macadam, 7.9 of chat, 7.8 of bituminous macadam, 2 of asphaltic concrete, 2.7 of warrenite, 6.5 of concrete, and 336.7 of graded earth. The earth road was constructed prior to the passage of the new law. The total cost of this work, which includes bridges and culverts, was \$1,106,600.

Many contracts have been let, and many more will be let



CONCRETE ROAD 13 FEET WIDE, JOPLIN SPECIAL ROAD DISTRICT, MISSOURI.

shortly, the work to start this spring, for the construction of the projects approved under the new road law. Work is now under way on 97.25 miles of road and ready to begin on 21.72 miles more when the weather permits, distributed as follows: 7.65 miles of gravel and macadam in Callaway county; 13.5 miles of concrete in Jasper county; 3 miles of bituminous macadam in Boone county; 6.5 miles of chats in Vernon county; 26 miles of gravel in Cole county; 15.5 miles of concrete in Mississippi county; 27.5 miles of gravel in Scott county; 2.2 miles of asphaltic concrete in Buchanan county; 19 miles of concrete in New Madrid county; 5.3 miles of bituminous macadam in Pettis county; 13.07 miles of bituminous macadam in Clay county; 1.75 miles of brick in Randolph county, and 1.6 miles of bituminous macadam in St. Charles county. The total estimated cost for the construction of this mileage is placed at \$1,108,824.71.

More miles of State and Federal-aid roads would have been under construction during 1919 if contractors had bid more freely upon advertised projects. The new road law requires competitive bidding, and when no bids are received within the estimate the State Highway Department is authorized to complete the project by private contract, force account or otherwise.

Failing to receive any bids, the department was forced to enter into a contract with the State Prison Board for the building of 7.65 miles of gravel and macadam in Callaway county with convict labor, and the scarcity of contractors and the great number of projects to be let this year will force the department to build other roads with convicts. About the only projects which attract road-building contractors call for expensive concrete, brick and macadam roads. Counties preparing to build the less expensive roads will be forced to organize local contracting concerns, and that is now being done in many counties in order to build this year the many roads that have been approved.

The roads to be built in Missouri this year with State and Federal aid will be almost entirely of a hard-surfaced type. Of this mileage embraced in the applications that have been approved by the State Highway Board, contracts for the construction of which

this year will be let shortly, 475.16 miles are to be of gravel to be constructed at a total estimated cost of \$3,299,147.53; 100.95 miles of concrete at \$3,461,452.01; 80.144 miles of bituminous macadam at \$1,959,263.64; 8.241 miles of macadam at \$32,043.41; 19 miles of water-bound macadam at \$170,869.88; 8 miles of asphalt at \$142,053.45; 6.54 miles of Joplin chats at \$41,514; 19.42 miles of brick at \$847,338.63; 17.22 miles of graded earth at \$242,973.

The new road law authorized the designation of 6000 miles of State road in Missouri and directed State Highway Engineer Graham without delay to survey and make plans of this mileage. It fixed the cost of the surveying and plans at not over \$100 per mile on the average, the cost to be deducted from the \$1200 a mile which each county was to receive free on not less than 50 miles of State road.

The engineering department promptly placed six State surveying parties in the field, made contracts with private engineering firms, and gave permission to counties desiring to do their own surveying for about 2250 miles of road. By December 1, when freezing weather forced the suspension of work in the field, one-third of the 6000 miles had been surveyed. Six hundred miles of this work had been done by the State parties. If the present rate of surveying can be continued, all of the authorized mileage will be done by the end of 1920.

Surveys have been made in whole or in part of 86 counties. In the remaining 28 counties no start has been made, but work in them will begin as soon as the weather permits in the spring.

The surveying by the six State survey parties has been done at an average cost of about \$75 a mile, leaving \$25 a mile for the completion of the plans. The balance of the surveying by the counties and contracts with private engineering concerns has been done at the price authorized by law, and that includes the plans.

Truly, Missouri is embarked upon a road-building movement, which, if allowed to continue, will soon result in a great system of connected hard-surfaced highways, reaching from the big cities to every county in the State.

New Highways for North Carolina to Cost Over \$15,000,000

By FRANK PAGE, Chairman State Highway Commission, Raleigh, N. C.

Road work in North Carolina is now being developed under a comprehensive plan that will, when completed, give this State an efficient system of highways. The State Highway Commission is now operating under a new law which enables it not only to plan definitely for its own work, but also to thoroughly co-operate with the National Government in Federal-aid work. Every section of the State is showing tremendous interest in highway improvement, with the result that there is close co-operation between the counties and the State looking to securing a system of highways that will enable their broadest possible utility. Some idea of the extensive work planned in the State can be had from the statement that the work so far in process of development or planned for involves over \$15,000,000.

Up to January 1, 1920, the Federal Government had assigned 114 projects. Applications have been received and approved for 87 of the even 100 counties in this State. Two projects have been settled for financially whose mileage is 8.34 miles, and 10 projects

have been completed and are awaiting Federal inspection by the Federal engineers aggregating 59.44 miles. Twenty-nine projects are now under construction.

Of the 114 projects submitted and not completed there are 92.84 miles of hard-surface road and 748.54 miles of gravel or similar type. Under construction and completed we have 109.7 miles of hard-surface road and 233.3 miles of gravel or similar type completed or under construction. Some 25 projects are now under survey, and the drafting department has 26 projects under headway, and 12 plans are completed awaiting approval of the Federal authorities. Surveys have been completed on 11 projects, and the drafting department will handle these projects on receipt of field notes.

Project statements, estimates and agreements for 114 projects total \$11,898,730.33, of which \$1,606,564.02 has already been placed under project agreement. In addition, the State Highway Commission has ordered 40 surveys totaling 546.5 miles and calling for an estimated amount of \$2,242,750. Some of these

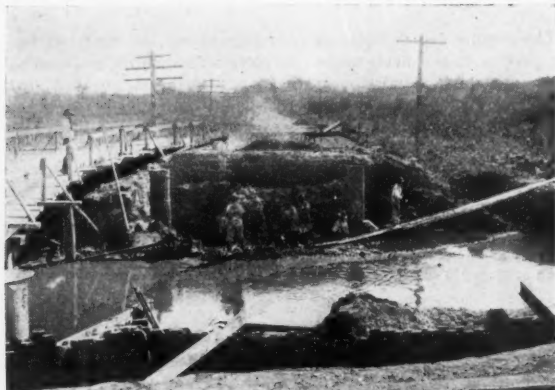


SECTIONS OF TWO MODERN HIGHWAYS IN NORTH CAROLINA.

surveys are under way at the present time. A summary of our work shows the following:

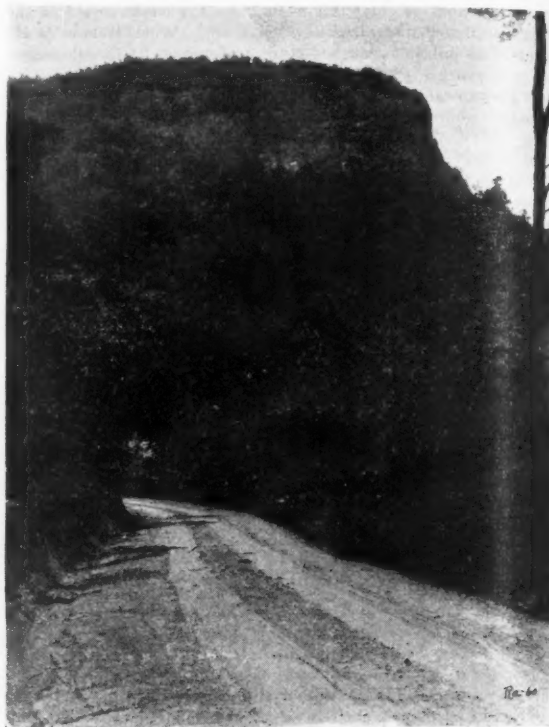
SUMMARY.

Project statements, agreements, estimates.....	\$11,898,730.33
Project statements not assigned	1,081,845.45
Surveys not under statement.....	2,242,750.00
Grand total.....	\$15,125,315.78
Actually under project agreement.....	1,606,564.02
Federal funds available to July 1, 1920.....	3,991,636.88
Of which \$1,606,564.02 are under project agreement, leaving \$2,385,072.86 to go under project agreement by July 1, 1920.	
Federal funds available to July 1, 1920.....	\$3,991,636.88
To July 1, 1921.....	2,161,957.19
A grand total of.....	\$6,157,594.07



CONSTRUCTING HIGHWAY BRIDGE IN NORTH CAROLINA.

On the list covering projects from 1 to 114 we show a grand total of 182.52 miles of hard-surface road and 982.64 miles of gravel, sand clay, topsoil and similar types, a grand total for 114 projects of 1164.18 miles.



FEDERAL-AID GRAVEL ROAD, HENDERSON COUNTY, NORTH CAROLINA.

Oklahoma Planning for Greatest Road Building Year

By MAX L. CUNNINGHAM, State Engineer, Department of Highways, Oklahoma City, Okla.

The Seventh Legislature for the State of Oklahoma, held in the early part of the year 1919, abandoned all previous plans of financing road work and devoted its attention to the matter of the creation of the State system and financing the construction of same by State-wide bond issue. This plan was placed before the people at a special election held on May 7 of that year, and failed to carry. On account of the concentration on this bill and its failure to meet popular favor, the work of highway building through State co-operation was practically wiped out.

It became necessary, in order to allow the State to avail itself of Federal aid, to make arrangements with various counties to furnish funds sufficient to offset Government allotment for that purpose, and this has been done in a number of cases by the creation of road districts of considerable size.

In cases where the highway department is administering funds, none of which are originally appropriated for the benefit of that department, it frequently becomes necessary to approve for local reasons various forms of construction which might not be used for the funds derived from sources other than county tax levy, but in most cases the department has had the active co-operation of county officials in the making of comprehensive plans for work of high class.

The State has filed with the Bureau of Public Roads a map covering 4760 miles selected by the Legislature from the State road system which covers the primary highways of the State and is used as a basis for the five-year construction program of the State of Oklahoma, and all Federal-aid projects are being built on some part of this definite mileage.

The department has at this time under contract or under agreement with the Bureau of Public Roads approximately 200 miles of highway construction, running from gravel road to all of the higher types of construction, and it is confidently expected that before the end of the calendar year 1920 work aggregating not less than \$7,000,000 will be under construction or completed as part of the State-Federal-aid program. Approximately \$600,000 of this fund will be spent on the building of important bridges which are

made necessary by the enormous expense of bridging the overflow streams rising in the Rocky Mountains and flowing across the State, which in most cases are county line boundaries and which have been the greatest obstacle to cross-State traffic in the past.

Three bridges of this kind are under construction at the present time, and bids are being considered on a fourth, with plans for others in course of preparation.

The balance of the work to be done will consist to a great extent of surfacing roads already brought to grade and on which the drainage structures are nearly all built, but owing to the fact that the standard of width of culverts, fills, etc., customarily used before the formation of the present highway department, is inadequate to meet the standards we require for work done in connection with Federal aid, it will be necessary to spend considerable sums in the building of extensions to existing structures and in widening cuts and fills. It is therefore probable that the work to be done will average a cost not less than \$35,000 per mile, with some construction going as high as \$50,000 and some gravel roads running considerably less.

Owing to the inadequacy of the transportation system and the shortage of cars, it has been impossible to make any definite progress on work under contract, or to make any real plans for work to be done. It is difficult for us to make estimates on the cost of work when the past year's experience has shown us that the car shortage and the failure of material to move when it once is loaded makes the overhead expense on construction work equal, and in many cases exceed, the entire cost of all other items entering into the construction.

We have found it impossible during the past two or three years to even attempt to enforce time limit clauses, and in many cases have executed contracts without any such clause in them, for the simple reason that many causes for delays are encountered which were not contemplated at the time work was started or contracted, that in order to be fair to the citizenship as well as to the contractors issuance had to be extremely liberal.

During the past year we have particularly endeavored to remedy

as many of the small defects on all of our roads as we possibly could because it seemed impossible to make progress on any large work. This has meant the rebuilding of many temporary structures in the form of permanent openings, and much of this has been done with local material that would not have been used except for the extraordinary transportation situation.

The State has made good use of its convict forces, confining their work almost altogether to the mountainous sections of the State, where much hand work was required in clearing and in removal of

rock and where the work, by its very nature, rendered it practically impossible to secure hired labor to attempt the job.

Beginning with February 1, Mr. R. C. Terrell, formerly highway commissioner of Kentucky, who has been in Oklahoma for nearly three years, will assume the office of State engineer, and Mr. Terrell has very definite ideas of what he expects to accomplish and has the hearty co-operation of all State and county officials. It seems that next year's program will be the first really big year of Oklahoma highway work, and the possibility for construction never seemed better.

Over \$11,000,000 for Modern Highways in Tennessee

By W. P. MOORE, Chief Engineer, Department of Highways, Nashville, Tenn.

This State has a designated trunk line system of highways which connects with the trunk line highways of all the adjoining States. Several such highways have been designated that traverse the State in a general north and south direction. The main east and west artery of travel will be by way of the Memphis-to-Bristol highway, which when completed will reach from the southwest corner of the State to the northwest corner, and will pass through Memphis, Jackson, Nashville, Knoxville and Bristol.

On State-aid projects there are 40.6 miles of highways under contract at an estimated cost of \$325,898.45, of which \$182,438.98 had been spent prior to December 31, 1919, thus leaving a balance of \$143,459.47 remaining to be expended during the present year.

Prior to December 31, 1919, there have been Federal-aid projects approved of the total length of 220.05 miles. Of this total mileage, 111.08 miles were let to contract during 1919 for the sum of \$1,709,006.54. There has been paid to the contractors on estimates to December 31, 1919, the sum of \$165,715.82, leaving a balance of \$1,543,290.72 to be spent on Federal-aid projects let to contract during the year 1919.

Summarizing the above, it is seen that there is a total of State and Federal funds of \$1,686,750.19 to be spent during the year 1920 on work let to contract during the year 1919.

The remaining 108.97 miles of Federal-aid projects not yet let to contract will be advertised early this year, and it is expected will be under construction in the early spring. It is estimated that this road work will cost approximately \$1,600,000, and that an additional \$190,000 will be spent for the construction of two steel bridges that will be built spanning the Cumberland and South Forked Deer rivers.

The program for 1920 covers road work in some 30 counties, for which the surveys, totaling 447.34 miles of highways, have been completed. This new work is all on Federal-aid projects, and it is expected that these plans will have been approved and let to contract in the course of the present year. Of this mileage, it is

planned to construct 230.8 miles of bituminous macadam at an estimated cost of \$25,000 per mile; 191.54 miles of water-bound macadam at an estimated cost of \$15,000 per mile, and .25 miles of one-coarse concrete road at an estimated cost of \$35,000 per mile. The total cost of the work enumerated above is estimated to be \$9,518,100. The surveys for this work have been completed and the plans are now being prepared for submission to the Federal Government for its approval.

Summarizing the work contracted for during the year 1919, and not yet constructed, with the new work planned, we have a total of \$11,204,850.19 that will be expended on highway construction during the present year.

Recently the drafting-room has been enlarged to take care of the great amount of mapping which will be necessary in the preparation of the above-mentioned Federal-aid projects. A complete outfit of testing apparatus for the testing of cement and fine aggregates has been ordered and will soon be installed, thereby affording better facilities for the testing of road-building materials and in order to prevent delay to the contractors.

It has been noted that as the mileage of good, substantial, hard-surfaced roads increases in this State that interurban motor truck lines both for the accommodation of freight and passenger traffic have sprung into existence, and the outlook for the future is that many more such interurban lines will be established.

The present sources of revenue for road-building purposes in this State are derived from the State taxes of one mill levied upon all taxable property in the State, automobile tax, county bond issues and Federal-aid appropriations. The various counties of the State have voted more than \$10,000,000 in bond issues which are to be used in building permanent highways, and it is only a matter of a short time when the predominating influence of public opinion will cause the State Legislature to vote an adequate State bond issue which will put Tennessee in the front rank of the States which have definitely lined themselves in favor of modern and adequate highway facilities.



SURFACE-TREATED CHERT ROAD NEAR MEMPHIS, TENN.



SURFACE-TREATED ROAD NEAR NASHVILLE, TENN.

South Carolina Developing Comprehensive State Highway System

By W. R. TURBEVILLE, Columbia, S. C.

On January 1 of this year the State Highway Department had received requests for Federal aid on 21 projects, totaling \$400,000. As soon as the war was over and demobilization under way the department sent its representatives to the various counties in the State, explaining Federal aid and asking the counties to apply for as much Federal aid as they could take up this year. Up to date the State Highway Commission has approved requests for 94 projects, totalling nearly \$2,500,000. This, added to the counties' share, makes approximately \$6,000,000 available for Federal-aid projects. In several instances the counties put up more than 50 per cent of the cost of the project. Most of these requests came in after April 1, and since that time the department has been exerting every effort possible to get the many projects under way. To do this it was first necessary to secure the services of competent engineers to handle the work.

Until recently South Carolina has done very little highway work of a permanent nature, and therefore there were very few experienced highway engineers in the State. The department has, however, secured a nucleus of experienced engineers to direct the work and has broken in new men until we now have a very complete and efficient organization. The policy of the department has been and is to take into its employ each year a number of engineering graduates from three State institutions and train them so that they will be a valuable asset to the State in supplying experienced engineers for county work, as well as State work. This is considered a very important function of the State Highway Department.

The department has completed surveys for 635 miles of road and completed plans for 384 miles of road. It has completed or has under construction 203 miles of road and 21 bridges and 19 concrete culverts. Plans have also been completed for 47 bridges and 73 culverts.

In location of roads the department has kept in mind at all times the accommodation and safety of the traveling public and the permanence of the location for all future use, as well as economy in construction.

The department has eliminated a total of 68 dangerous railroad crossings by proper relocation of the roadways and the use of overhead crossings or underpasses.

The commission has adopted the following standards for the coming year: The width of all roadways to be not less than 23 feet at the grade line on all fills and 32 feet in cuts. No grade to exceed 5 per cent. No curve to exceed 12 degrees except in the most exceptional circumstances. All bridges to be either concrete or steel and not less than 18-foot clear roadway, and designed for a 15-ton truck. All embankments to have a slope of $1\frac{1}{2}$ to 1, and side of all cuts to have a slope of 1 to 1. This much of the roadway is standard for all types of roads, and any type of surfacing can be put on that the county is able to pay for.

The department has six well-organized field parties on the job all the time.

After contracts are let for the construction of a project a competent inspector or resident engineer is put on the project and remains throughout the construction until completed.

Texas to the Forefront With \$125,000,000 for Modern Highways

By H. T. WARNER, Austin, Texas.

With county issues aggregating \$80,000,000; with other bond issues impending and certain to be voted amounting to probably \$30,000,000; with Federal aid of \$16,000,000 plus equipment valued at above \$2,000,000, and a State fund of about \$1,700,000 available, annually, it is apparent that Texas is going to build some roads during the coming year—if.

Originally that word "if" was possibly several syllables in length; but it has been worn down to two of the thinnest letters in the alphabet. The Texas "if" embraces a lot of things—the weather, lack of labor, scarcity of material, petty politics, mistakes of the first highway commission.

The first "if"—the weather—has been the greatest preventive of work during the past several months, for the State highway department, which has supervision of all the work being done in the State, is overcoming all of the other handicaps.

For more than a year the rains have held Texas almost helpless in certain matters, and road building is one of them. In the black land counties of the North and Central sections it is practically impossible to do anything for the reason that neither men nor materials may move over the roads, deep in mud. Along the coast counties the same is true.

This condition is causing a great willingness to vote bonds, however, and there are few failures in submissions. But at the same time the bad roads have given rise to a strong desire upon

the part of every farmer in the State to have a durable road run alongside his farm, and this has served to bring petty politics into play, the government of Texas counties being in the hands of County Commissioners, who are practically all-powerful.

These commissioners endeavor to have the wishes of their constituents satisfied, and this militates against the plans of the State Highway Department to have the connecting roads first finished.

However, the department has now definitely decided upon its policy, and the State highways are to be given first consideration in every way, and where there are gaps—counties which have refused to issue bonds or which have previously issued bonds to the extent of their ability and the resultant roads have either blown away or been ground into the mud—special efforts are to be made to compel them to come into line. In this manner the whole system will be the sooner completed.

Here is a summary of the work done by the highway department to the end of December, 1919:

Number of projects submitted and approved.....	74
Mileage thereof, located in 119 counties.....	6,900
Estimated cost when completed.....	\$61,999,100
Federal and State aid granted.....	\$21,919,400
Aid paid out on completed projects.....	\$2,412,735
Miles completed.....	21

The highway department is presided over by three commissioners, named by the Governor. R. M. Hubbard is the chair-



OLD TYPE IMPROVED ROAD DESTROYED BY TRAFFIC.



ONE OF TEXAS' FINEST ROADS—GRAVEL WITH BITUMINOUS TOP.

man, C. N. Avery and C. H. Fowler the associates. These commissioners receive no salary, but are allowed per diem and expenses not to exceed \$1000 per annum.

The executive head of the department is Rollen J. Windrow, the State Highway Engineer, who is the highest-paid official in Texas, receiving a salary of \$10,000.

Mr. Windrow has organized his staff now, and they are actively at work. There are eight divisions, and in each is a competent engineer who has charge of all the projects in that division. These divisions are located to divide the State on the number of projects actually under way and the amount of work connected with each.

In the office there are several other consulting engineers, all of them experts in their line, who have charge of the work of supervising the plans; of gathering materials; of assisting in every possible way the division engineers and the engineers employed by the counties.

These engineers are all paid by the State, but their entire service is devoted to the counties which are constructing roads. Under the legislative act creating the highway department the construction of roads by counties may not be proceeded with until the plans have been approved within the department, and this without reference to whether State or Federal aid has been granted. This provision has created some friction, but it is working out in an admirable manner.

The funds of the department are derived from only two sources. The State imposes a tax upon automobiles, both cars and trucks; upon dealers in automobiles, motorcycles, chauffeurs and upon the transfer of cars or trucks. This tax is graduated according to the selling price and the horse-power of the car, but the minimum is \$7.50. One-half the fund derived from this tax goes to the State Highway Department and the other half to the county where the tax is collected, use of the latter funds being limited strictly to maintenance of the roads in that county, and so strictly has this been interpreted that original construction work may not be done from the fund.

The registration of cars in Texas for 1919 was about 332,000; for 1920 it is anticipated that the registration will be approximately 400,000 and that the highway department will be in receipt of some \$1,700,000 from this source, of which probably \$500,000 will be expended in administration expense—that is, in the salaries of the engineers, in seals, number plates and clerical work of various sorts. That will leave \$1,200,000 to be devoted to the matter of building roads.

The other source of income is from the post road fund through the Federal Department of Agriculture. To date this fund has amounted to approximately \$16,000,000, and this entire sum has been allotted to various projects.

The allotment does not mean that the money has been actually expended, for that is not true.

In addition to this sum of money the department has also received some hundreds of trucks and cars from the War Department, and these are being distributed to the counties which have actual work under construction.

Supplementing these funds, bond issues have been floated in 119 counties, aggregating some \$80,500,000, and there are to be other bond issues, but the department is frankly telling the promoters that they should be in no hurry, because the Federal aid has been allotted and there is no more in sight, though there is anticipation that there will be.

During 1919 the work was very seriously handicapped by the weather. It rained throughout the whole of the year, but the time has been used in organization work, in finding materials and in developing sentiment in favor of a system of State highways rather than in a system in each county independent of that in any other county.

When the department was first organized aid was granted every county which would issue bonds and apply. No special effort was made to develop a strong chain of counties for the purpose of building State highways, and the department as it is now organized must do all this work and overcome the terrific handicap of the error of the first commissions.

With some 64 highways designated, forming a regular gridiron of the State, not one is in such shape as to assure that it will be completed entirely across the State in either direction. The commission is now concentrating its efforts on No. 1, known as the Bankhead Highway, which runs from Texarkana, on the northeast corner of the State, by way of Dallas, Fort Worth

and Amarillo to El Paso; and on No. 3, which enters the State at Orange and proceeds by way of Houston and San Antonio to El Paso.

The north and south highway is to go from Brownsville, on the Mexican border, by way of Houston and Palestine to the Red river, but there is a great deal of work to be done in lining up the counties which now are gaps.

Mileage of projects which have been approved and which have been granted Federal aid prior to October 1, 1919, amounted to 981 miles; State aid was granted to other projects which have a mileage of 524. Since October 1 additional projects have been approved and granted Federal aid which total 642 miles. The distinguishment is made by reason of the fact that the reorganized highway department began to get its new plans into effect about October 1.

From October 1 the department approved some 40 projects in 32 counties, the estimated cost of which is \$8,341,472, of which amount \$2,432,462 is to be Federal aid.

On projects completed or nearly so the amount of State aid paid out has been only \$700,000, and the Federal aid \$500,000. This is a good indication of the handicap under which road building has labored in Texas.

With many millions available for the work, it has been found not possible to proceed with the many projects, some for one reason and some for another.

But with the coming of good weather there will be an impetus given which will assure completion of many miles of highway—not merely good roads—during the coming year.

While gravel is the most common material in use in the State, there are also many miles of concrete base and asphalt top roads assured, and the highway department is urging the gravel base with bituminous top as the most desirable type where the expense of the concrete is too great for the county to undertake.

The highest-priced roads in the State are those in Jefferson county, of which Beaumont is the capital. The average cost is approximately \$40,000 per mile. McLennan county has also a few miles which will cost above \$45,000, and Rockwall county, the smallest in the State, will have about 35 miles of concrete road at a cost of \$35,000 per mile.

There are numerous counties in the western section of the State which can construct good, durable roads at a cost of \$5000 per mile. This is made possible because of the character of the soil, there being about as much blasting as there is building up.

The elimination of grade crossings is a matter to which the highway department is giving close attention. While there has been no actual census, it is estimated that in the State—outside the cities and towns—there are about 2500 grade crossings, and that each one is eventually due for an accident. To date the department has succeeded in eliminating 81 of these crossings, these being located in about a dozen counties, and the engineers are under instructions to permit no grade crossings where it is possible to eliminate them. Had this policy been adopted from the beginning there would have been twice as many eliminations. But it is figured that when the work is done in the entire 250 counties in Texas there will be a reduction of at least 75 per cent. in the number of the crossings.

Mississippi Labor Unions May Withdraw from American Federation.

Yazoo City, Miss., January 19—[Special].—Trouble, which may result in a withdrawal from the American Federation of Labor, is brewing in the union labor organizations of Mississippi. Without the knowledge and consent of the State organization, it is said, national organizers from other States representing the American Federation of Labor organized local unions of carpenters, plasterers, bricklayers, etc., in the principal cities of the State.

When the Mississippi branch of the Federation of Labor held its annual meeting in Jackson recently, white delegates were surprised to find twenty or more negro delegates, duly accredited from local unions, in attendance.

Secret or executive sessions are said to have taken place where withdrawal from the American Federation was talked. A resolution was adopted and sent to President Gompers requesting that Southern labor leaders be allowed to handle Southern questions and that those unfamiliar with the South's problems be kept away from this section.

Virginia's Comprehensive Highway Plans: \$12,000,000 for 1920 Work

By C. S. MULLEN, District Engineer, State Highway Commission, Richmond, Va.

Highway work in the State of Virginia is administered by the State Highway Commissioner, the present commissioner being George P. Coleman. In addition to the commissioner, who is the executive head of the work, a commission of five members was authorized at a special session of the General Assembly, which was called during the latter part of the past summer for the purpose of providing means for meeting the increased Federal appropriations, and also to formulate various laws for the administration of the work of the Highway Department. The statute provides that the State Highway Commission shall meet quarterly and at other times as called by the chairman or the commissioner to transact such business as shall be properly brought before it.

The members of the commission are appointed by the Governor by and with the advice and consent of the Senate, and are removable from office by the Governor for cause. The following members were appointed to take office November 1, 1919, on which date a meeting of the commission was held and the following organization established: Wade H. Massie, chairman, Washington; H. P. Beck, secretary, Richmond; J. A. Mundy, Natural Bridge; F. W. Davie, Lawrenceville, and H. Hardaway, St. Paul. In the order given these men represent the five grand divisions of the State which are designated Piedmont Virginia, Tidewater Virginia, Valley Virginia, Middle Virginia and Southwest Virginia.

The commission is authorized to consider appeals made by citizens of the State from decisions of the commissioner; as to location of routes and allotment of funds; to make and enforce rules and regulations covering traffic on and the use of the State highway system; to fix the salary of the assistant highway commissioner and other employes of the State Highway Department, and is vested with the power of eminent domain in so far as may be necessary for the establishment, location, construction, reconstruction, alteration, maintenance and repair of the roads embraced in the "State highway system," and for these purposes and all purposes incidental thereto, may condemn rights of way of such width and on such routes and grades as by said commission may be deemed requisite and suitable; and lands, quarries and locations, with rights of ingress and egress, containing gravel, clay, sand, stone rock, timber and any other road materials deemed by the commission useful or necessary in carrying out the purposes aforesaid.

A very apparent result of road improvement in the State is the increasing use of motor trucks for transportation of freight, produce and passengers. As fast as gaps are closed and more or less continuous stretches of road are opened to traffic, the rural motor express appears.

There are many motor transportation lines in operation, the passenger lines running on regular schedules and using closed cars,

which are quite as comfortable in cold weather as the average street car.

The Postoffice Department is operating a number of motor-truck lines for the handling of produce as parcels post. The longest line at present in operation is about 200 miles in length.

Such traffic is proving very destructive to some of the lighter types of road, and consequently the plans for the State highway system will require the resurfacing of a considerable mileage of roads which are surfaced with gravel, soil and other less durable material.

The road work in the State is carried on at present under two separate and distinct plans, one having to do with the construction, reconstruction and maintenance of the roads embraced in the State highway system and the other having to do with similar work on the roads embraced in the county highway systems.



GREATER HAULAGE POSSIBLE OVER VIRGINIA'S IMPROVED ROADS.

The State highway system was selected by a special commission appointed by the General Assembly "to formulate a plan of State roads," and was adopted by the General Assembly at its regular session in 1918. This system connects the cities, towns and county-seats of the State, so far as practicable, and when its construction is completed will furnish ready and easy communication between important points in Virginia, and will afford to the farmers of the State convenient markets and ready access thereto. A glance at the map of the State highway system shows that Richmond, the capital of Virginia, although located far to the east and considerably to the south of the geographical center of the State, is the hub of the State system, roads radiating in approximately direct lines from Richmond to the farthest corners of the State. The approximate mileage embraced in this system is 3800 miles a portion of which is already improved and is now being maintained by the State. However the larger part of this mileage is still unimproved. At the present time funds available for this work are derived largely from the State's apportionment of Federal aid met by direct appropriations from the State Treasury, the proceeds of a special road tax, and contributions from counties interested in having sections of the State road immediately improved. The State convict road forces are also assigned to this work, and their labor amounts annually to the equivalent of approximately \$500,000.

For the coming year the prospects for making a serious start on the construction of the State system are excellent, and during 1920 and 1921 available funds in sight for construction and reconstruction amount to approximately \$10,000,000. Contracts are being let as rapidly as possible, and by the time open weather for road work is at hand highway construction in Virginia will be well under way.

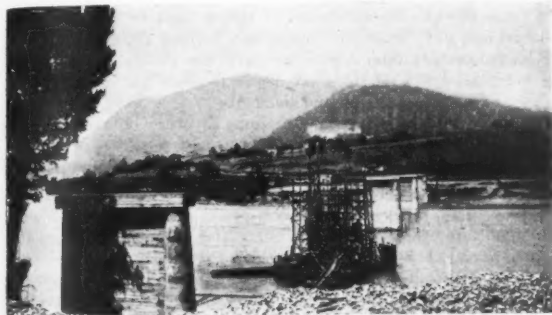
In addition to the money appropriated for construction, two-thirds of the proceeds derived from the payment of licenses for motorcycles, automobiles and trucks will be devoted to the maintenance of such sections of the State highway system as are now in condition to be maintained.

For work on the county highway system the funds are derived from direct appropriations made by the Legislature for 50 per cent of the cost of such work as the county undertakes to the extent



BUILDING A VIRGINIA ROAD.

of each county's apportionment of State money aid. To secure this money the local road authorities of each county are required by the State money aid law to make application to the State Highway Commissioner before the 31st of December of each year for their portion of State money aid for the next succeeding year and to designate what roads are to be built with the money so ap-



CONSTRUCTING FOUNDATION FOR VIRGINIA HIGHWAY BRIDGE.

plied for and to present to the commissioners plans and estimates on the roads they intend to build. The State money aid can be used either for construction or maintenance. It is the policy of the department to urge most earnestly the use of this money for the required maintenance in those counties where in previous years the money was used for the construction of roads. In addition to the State money aid, the law of the State permits the counties to issue bonds for road improvement, and many counties in the past have taken advantage of this law and at the present time surveys are being made in a number of counties preparatory to determining whether bonds shall be issued for road improvement. It is impossible at this date to forecast the amount of these bond issues, but it is safe to say that bonds will be issued during the coming year for well up to \$1,000,000 for the improvement of county highways.

Approximately \$700,000 has been appropriated by the State as State money aid, and with an equal expenditure by the counties, will give a fund of \$1,400,000 for work on county highway systems.

From all sources, and for construction, reconstruction and maintenance of both the State and county highway systems, Virginia will have available for the year 1920 approximately \$12,000,000.

\$15,000,000 for West Virginia Road Building in 1920

By C. P. FORTNEY, Chairman, State Road Commission, Charleston, W. Va.

It is believed that in order to understand the conditions in West Virginia that a short history of the road work be given.

The organization of the State Road Commission was authorized by the acts of the State Legislature 1917. This was done in order to meet the requirements of the Federal Government through the Bankhead Act.

Just as soon as this commission was established and the members appointed their first acts were to establish a State road system. The appointment of the commission and getting started practically absorbed the first year. The war prevented any extensive road work during all of 1917-18. The year 1919 opened with better prospects for road building. The encouragement given road construction by the Federal Government had quite a decided effect on the work in West Virginia. The allotment to this State was approximately \$1,700,000 for this year. The State has to meet the Federal aid on a 50-50 basis, which means that the State raised another \$1,700,000. This started quite an extensive road-building program, and that there has been about 700 miles of road constructed within a few years, which shows that the State has been active in this matter.

Road building in West Virginia is comparatively new. It is believed that the first attempts toward road building does not date back farther than 1915. While it is true that a few spasmodic attempts at road building was made as far back as 1913, nothing of a very serious nature was accomplished. The increase of wealth in West Virginia, and likewise in its population, has brought this State to a point where road construction is almost an absolute necessity in order to transport various supplies from the farm to the centers of industry. This is more especially true due to the fact that the railroads have practically ceased to construct any new lines due to the war and other reasons. It is especially noted that as soon as a road of any length is made suitable for traffic there immediately begins a concentration of traffic over the road.

The roads first constructed were very narrow. The tendency is toward wider pavements and better roadbeds and drainage and just as good pavements as the section of the country through which the road is constructed can afford. It is believed that it is more to the advantage of this State to grade its roads and have them properly drained preparatory to the paving than to have the road completely constructed in any one year.

The State is preparing rather an extensive program for this coming year, as will be shown by the following figures: There will be available from State aid, \$3,000,000; county taxes, \$3,000,000; county bond issues amounting to \$9,000,000 or more. This makes a total for the year 1920's program of \$15,000,000. With what is now under contract and with what is now contemplated, it is proposed to construct approximately 300 miles of hard-surface roads and 200 miles of graded earth roads.

The State Road Commission at present is not in position to take part in the actual construction of roads, but rather acts in an advisory capacity. The reason for this is that the State Constitution only permits the counties to engage in public improvements of any sort. In a recent meeting of the State Legislature there were two amendments submitted for vote to the people in November, 1920. The first amendment is to enable the State to construct and maintain roads and the second amendment is to enable the State to provide means therefor, which may be done by way of taxes derived from the sale of automobile licenses or from direct taxes or by a bond issue not to exceed \$50,000,000. The prospects for the passage of these two amendments seem very favorable.

Contractors' Bids Insist on Elimination of Union Labor Clause.

Dallas, Tex., Jan. 23—[Special.]—Three of four bids submitted to Dallas county by contractors for additions to the Woodlawn Tubercular Hospital specified that union-labor clauses must be eliminated in the contract. No mention of the union-labor question was made by the fourth contractor. The bids submitted on construction of a dining hall and living quarters for employees, costing approximately \$75,000, were from Hickey & Montgomery, Munn Construction Co., W. H. Link, and Watson Construction Co.

Dallas County Commissioners' Court was involved recently in a controversy when union carpenters refused to work for A. Munn, contractor, in building additions to the Woodlawn hospital, because Mr. Munn employed open-shop labor on another job. County Judge Cecil L. Simpson said when the bids were opened that he was informed 90 per cent of the Dallas contractors have signed open-shop agreements.

The Dallas Open Shop (Square Deal) Association has filed its charter with the Secretary of State at Austin. The association has no capital stock. Its purpose is given as being "to collect and disseminate information to the public showing the advantages of the open shop in the manufacture, sale and distribution of goods, wares and merchandise, and in the construction of buildings and other improvements in the county of Dallas and adjacent territory."

Directors of the association are M. N. Baker, R. F. Baker, J. E. Lee, Sam P. Cochran, W. M. Holland, Harry L. Seay, T. E. Jackson, George E. Watson, J. F. Strickland, Frank Austin, Frank M. Smith, W. S. Mosher, W. Brown Fowler, T. G. Halley, G. C. Weaver, George McCaine, J. R. Johnson and J. H. Williams.

THE IRON AND STEEL SITUATION

Some Increase in Steel Production, With Advancing Prices.

Pittsburgh, Pa., January 26—[Special.]—There is much complaint of car shortage in the Connellsville region for loading coke, at coal mines for loading coal for by-product coke ovens, and at steel mills for shipping finished product. From one viewpoint the impression is created that things are in a bad way, but from another viewpoint it is seen that production has increased and is aiming to increase still more. For illustration, while there is continued loud complaint as to the car shortages in the Connellsville coke region, for three successive weeks the production of coke has increased. The increases are only very slight, but they are increases. If there were an adequate supply of cars the increases would have been much greater. Similar conditions obtain as to the output of by-product coke. The blast furnaces are making pig-iron at a better rate than on January 1, but not at as heavy a rate as desired.

Steel mill operations are now at between 85 and 90 per cent of capacity, taking the industry as a whole, against about 80 per cent at the beginning of the month and an average of not over 60 per cent during the last three months of last year. The Carnegie Steel Co. reports operating at nearly 95 per cent.

Higher Pig-Iron Prices.

A meeting of a number of merchant pig-iron producers in Western Pennsylvania, the valleys and Cleveland, constituting a division of the American Pig-Iron Association, was held in Pittsburgh last Wednesday. Reports are that a wide diversity of opinion was developed as to market conditions and prospects. Some of the manufacturers expressed a willingness to sell second-half pig-iron at this time, while others expressed the intention of waiting for still higher prices. It was argued by some that as the expected advance of \$1 per ton in Lake Superior iron ores for the 1920 shipping season would increase the cost of making pig-iron by nearly \$2 a ton, prices for second-half delivery should be \$2 above the maximum prices realized for first-half deliveries. Predictions were made that while coke is costing an average of about \$6 per net ton at Connellsville ovens now, the prices will be \$8 to \$10 for the second half.

The local pig-iron market has advanced in the past week about \$1 a ton on basic iron and \$2 a ton on Bessemer. For extended deliveries the market is now as follows: Basic, \$37; Bessemer, \$39; foundry, \$40. f. o. b. valley furnaces, freight to Pittsburgh being \$1.40. Small lots for early delivery would probably bring higher prices in the case of Bessemer, which has sold at \$40 in one or two cases, and certainly in basic iron, while as to foundry iron it is a question whether much prompt iron could be secured at any price.

These prices are very profitable to the merchant furnaces, since they represent an average advance of \$12 a ton over prices established by the reductions of March 21, 1919, and maintained for months, with some occasional shading. On account of the rise in coke, due to advancing pig-iron prices, the furnacemen must divide part of the money with the coke producers, and the prospective advance in ore would be a further division, with the ore producers, if pig-iron prices do not rise further.

Steel Prices Advancing.

Early deliveries of many steel products are bringing still higher prices. Plates readily command 3.50 cents in small lots, the regular or March 21 price being 2.65 cents. Merchant steel bars are bringing 3.50 cents and even higher for small prompt lots, while moderately extended deliveries command 2 cents. Large premiums can be obtained for sheets, but there is very little tonnage available. Sheet bars, priced at \$42 by the March 21 schedule and at \$51 under the war-time control, have sold in large lots between mills and regular customers at \$50, while sheet consumers desiring to buy bars for conversion under contract with sheet mills have paid \$55 or higher, and would probably pay \$60 in some instances.

Prospective Price Levels.

The present market for steel products, however, concerns early deliveries. The United States Steel Corporation is sold up on

the majority of its products for six months or more, while the independents have sold relatively little tonnage beyond April, with the exception of a few producers. In the circumstances the Steel Corporation has no particular occasion to sell large tonnages at this time for the late deliveries it would have to promise, while the customers of the Steel Corporation, having material due them for longer periods than is the case with the customers of most of the independents, have no great desire to cover for the late deliveries. The sales made by independents of late have been chiefly for early deliveries, at such premiums as were obtainable or as they chose to ask.

The more important market question at this time is the prices at which the larger independents will sell for extended deliveries. The independents have really had no settled price policy of late, their only care being not to commit themselves farther ahead than might afterwards prove advantageous. Some are sold only to about April 1, although they have made promises to some regular customers that their second-quarter wants will be taken care of at prices to be named later. The independents must now determine at what prices they will sell. In the past the leadership of the United States Steel Corporation has provided an effective and intelligent market guide, but the independents have lately renounced Steel Corporation leadership because it involved adherence to the March 21, Industrial Board or "stabilized" prices, and that price schedule has been steadily growing more distasteful to the independents, as they have seen the opportunity to secure higher prices and have less disposition to consider the more distant future than is the case with the Steel Corporation. The indisposition of the independents to sell has accentuated the anxiety of consumers and led them to bid higher prices.

If the steel market were allowed to drift as it has been doing during the past few weeks a runaway would necessarily result. Each price advance would bring on another, when buyers are fearful of not being able to get material, and whenever the price structure became topheavy it would topple over. In its whole history the steel market has had only one runaway and a partial runaway. There was a full-fledged runaway in 1899, with the inevitable reaction, while there was a runaway in 1917, which the prospect of Government control tended to curb in its later stages. Conservative interests in the trade do not want a runaway, which would promise no benefits to any but the small producers with clear order books, who would profit during the runaway by being able to make quick deliveries, and could then afford to shut up shop for a year or two.

Predictions are accordingly being made that the leading independents will advance prices moderately above the March 21 schedule and then refrain from making further advances. One prediction, which seems quite reasonable, is that prices will advance to the level obtaining before the March 21 reductions; in other words, to the level made by the reductions of December 12, 1918, from the war-control price-list. Another prediction, however, is that prices will advance clear to the war-control level. The reductions of December 12, 1918, ranged from \$4 a net ton on bars and shapes and \$5 on plates up to \$8 on tin-plate, but there was no reduction on wire products. The reductions of March 21, 1919, were \$5 a net ton on wire products and grooved steel skelp, and \$7 a ton on bars, shapes, plates, sheared and universal skelp, pipe, sheets and tin plates.

Advances equal to the March 21 reductions could not be considered excessive by any means, seeing that much higher prices have willingly been paid for early deliveries, but, on the other hand, the industry is just over the strike, with its curtailment in production, and there is no means of knowing how long the shortage in steel would last in a period of full production.

There would be two awkward features in the situation for the independents: One, that they would be placed in the light of charging their customers higher prices than the Steel Corporation charges its customers; the other, that labor would probably demand higher wages.

Iron Ore.

Until some time in November it was regarded as well established that Lake Superior iron-ore prices for the 1920 season would be the same as ruled for the 1919 season, minus the reduc-

tion in ore freights that is expected, there having been levied an extra rate on iron ore from mine to lake port as a war measure, about 35 cents a ton. When pig-iron continued soaring, however, the ore producers concluded that an advance might be made just as well as not. Recently it has looked as though the Lake vessels would be able to advance their carrying charge from the head of the Lakes to Lake Erie ports from 80 cents to \$1, this being, of course, a regular part of the ore price, which is named at Lake Erie dock. The ore producers may make an advance of 50 cents for themselves, which would be 70 cents altogether, including the Lake rate advance, or they may advance 80 cents for themselves, making a dollar to the buyer of ore.

The New Alliance of the Midwest, Gulf and South Atlantic.

By MATTHEW HALE, President the South Atlantic Maritime Corporation.

Today marks an epoch in American foreign commerce. The great producing States of the Midwest have issued a declaration of independence in foreign trade that will have a revolutionary effect on our industrial life. They have risen in their strength and have declared that from now on they will be free and independent of any one port or of any one railroad; that they are no longer to be considered "naturally tributary" to any one port, but that they shall have the right to choose their own ports and their own carriers to the ports. In this stand that they have taken they have the hearty backing of the Gulf and South Atlantic States.

In the past, due to the influence of the Eastern trunk lines and the shipping interests of the Southeast, they have been obliged to ship by the North Atlantic ports. Now, thanks to the Railroad Administration and the Shipping Board, which have recognized that our foreign trade and that our merchant marine must be treated as national and not as local problems, the ports of the Gulf and South Atlantic have been opened to the manufacturers of the Midwest by the equalization of export rail rates and by the allocation of ships to the Southern ports.

The States of the Midwest are determined to keep their hard-earned rights. The commercial organizations of the leading cities of 24 of these great States have formed the "Midwest, Gulf and South Atlantic Foreign Trade and Transportation Committee." This committee, at a meeting held in Cincinnati on January 12, has perfected its plans. Senator Jones of Washington, chairman of the Senate Committee on Commerce, has granted the committee an all-day hearing on January 27. That same evening a conference on the new trade routes and on the railroad rates will be held at the New Willard Hotel, at which time it is expected that the Senators and Congressmen of these States will confer with the delegates present. The platform of the committee is simple, brief and clear. It insists that the Midwest's new outlets to the sea shall be preserved; that the new trade routes shall be continued, and that the rights extended to them by the Railroad Administration and the Shipping Board shall be perpetuated in the legislation now pending before Congress. The Eastern trunk lines and shipping interests are making bitter attacks on the new outlets and the new trade routes. The Pennsylvania Railroad, Baltimore & Ohio and Erie have protested against them in a letter to Director-General Hines. The New York State Chamber of Commerce, closely identified with the railroad and shipping interests of New York, has also attacked these new rail rates. The position of these bodies is in strange contrast to that of the commercial organizations of the great ports of Boston and New York. At a hearing before the Railroad Administration on October 8, Mr. Chandler, representing the Boston Chamber of Commerce, said: "Boston is not inclined to play the dog in the manger in this matter. * * * I cannot see how I can object to the Southern ports being given the same rates as Boston and other Northern ports." Mr. Austin, speaking for the New York Produce Exchange, said: "Our position is that the rates to all ports from New Orleans to Portland should be the same, no matter where you come from or where you are going."

The Midwest has no axe to grind with New York. It is always ready to ship by New York when New York can render the best service. It insists merely in not being forced to ship through New York by an arbitrary discrimination in rates in New York's favor. The Gulf and South Atlantic States are backing the West in this

position. The West and the South and certain commercial bodies of the ports of New York and Boston says: "A fair field for all, and may the best one win." The Eastern carriers and shipping interests say: "We want it all."

Iron Trade Never Busier—Why Prices Are Mounting Ever Higher.

There is a continual inquiry on the part of consumers as to the justification for the constantly increasing price of iron, says the Matthew Addy Company's market report for January 24. They are inquiring whether or not there is profiteering. There is not. The advancing prices of iron hardly keep pace with the advancing costs. Everything that enters into the manufacture of iron goes up and up. And it seems to be almost axiomatic these days that every increase in wages is accompanied by a decrease in efficiency. That is the plain truth. Practically no furnace operations, going back for six months, have been continuous, as shutdowns and interruptions of various kinds have been extremely extensive. So in the high prices of pig-iron there is an accurate reflection of mounting costs of labor and of the other greatly increased expense because of the demoralization consequent upon strikes and a general upset, so to speak. Conditions are not normal. That is the story in a nutshell. If an improvement is to be made that in the old days would have taken a month, now it may take six months. We have in some mysterious way slowed up all along the line, and this slowing up is fearfully and distinctively expensive.

Never was the iron trade busier—not even in the midst of the activities of the war were plants more rushed than at the present time. And such is the confidence in the future that in spite of high costs of construction very large additions and extensions to present works are in contemplation.

Pig-iron orders keep flowing to the furnaces in a steady stream. And there is a growing demand for iron for the last half. Merchant furnaces are in perplexity when it comes to gambling on iron for forward shipment. The price of ore for 1920 has not yet been fixed, nor has the price of coke. So it is impossible for the ironmaster to know what it will cost him later on to make iron. It is just a guess. But the present temper of the ore and coke producers leads one to believe that these gentlemen will not render any active assistance in reducing the cost of iron—quite the contrary. At the present time there is not a sign that pig-iron will drop in price. Everything points to higher prices; there is a constant demand and a constant increase in the elements that go to make up the cost of manufacture, so here are the ideal conditions that make for higher prices.

Of course, we are a great people and we have marvelous resources in the way of raw materials. We are IT; no doubt of that. But just now we are not functioning in a way to make any of us very proud.

Immense Plant of Birmingham Coke & By-Products Co. Soon to Be Placed in Operation.

Birmingham, Ala., January 26—[Special.]—Repeated delays have been experienced by the Birmingham Coke & By-Products Co., and the plant, which was to have been in operation nearly a year ago, is only now reaching completion. By March 1 it will be producing coke, tar, benzol, sulphate of ammonium, etc. The Government has made settlement on contracts entered into for the by-products of the plant. Mr. Morris Bush, president of the company, announces that there will be no trouble in disposing of the various products. The National Cast Iron Pipe Co., the Vulcan Foundry and other industries in the vicinity of Boyles will take gas from the plant. The industry involved an expenditure of \$2,500,000.

Big Plant for Porcelain Manufacture.

Porcelain products for electrical insulating purposes will be manufactured at Baltimore by the Locke Insulator Co. of Victor, N. Y. This company proposes to build a factory occupying a 15-acre site on the water-front, and from \$1,000,000 to \$1,500,000 will be the expenditure for land, buildings, machinery, etc. A 24-kiln plant employing 700 operatives is proposed. Symington, Hoffman & Co. of Baltimore have recently purchased the Locke Insulator Co.

Miscellaneous Cargo from Jacksonville to Europe.

Jacksonville, Fla., January 26—[Special.]—Built at Jacksonville, assigned by the United States Shipping Board to a Jacksonville firm, fueled and loaded completely at Jacksonville, the 6000-ton all-steel steamer Jacksonville cleared Saturday with a general cargo for Boulogne, Antwerp, Rotterdam and Hamburg.

The Jacksonville was the first launched of a class of four similar ships built in the yards of the Merrill-Stevens Shipbuilding Corporation. The others are the Wekiki, Pinellas and Chickamauga, of which the second, the Wekiki, is being outfitted and is expected to sail within two weeks.

The cargo of the Jacksonville, furnished by the American Shipping Corporation, consists of cotton, naval stores, lumber, phosphate, pig-iron, steel billets and general merchandise assembled from widely divergent points and showing the extensive range of territory served by the rapidly expanding port of Jacksonville.

The steel billets which the new ship will carry to foreign ports come from Chicago, the pig-iron from Birmingham, the cotton from Arkansas, Tennessee, Georgia and Alabama. An interesting item of the ship's cargo is a large number of bales of Florida palmetto leaves, consigned to Antwerp and Rotterdam.

The clearing of the Jacksonville marks the inauguration of a regular direct steamship service between this port and the leading markets of Europe.

Organization of New Baltimore Shipyard.

The Globe Shipbuilding & Drydock Co. of Maryland has been incorporated with a capitalization of \$5,000,000 to establish the shipbuilding plant recently announced. It has organized with the following officers: B. C. Cooke, president; M. A. Leahy, treasurer; Frank Miller, secretary; James McKellar, general manager. This company has obtained a 30-acre site at Fairfield, near Baltimore, with 1000 feet of deep water frontage and extending back 2300 feet to the Baltimore & Ohio Railroad. It will excavate slips for the 8000-ton drydock it has purchased from the Savannah (Ga.) Drydock & Repair Co., build marine railway, construct wharves, erect shops, install machinery and provide all other facilities necessary for the construction of steel vessels.

First Direct Steamship From Jacksonville to Japan.

Jacksonville, Fla., January 23—[Special.]—The Japanese steamer Tripp, a 9000-ton vessel, now loading at the Commodore's Point terminal and to clear on Sunday, will be the first ship dispatched direct from Jacksonville to Japan. The voyage will be made by way of the Panama Canal to the important Japanese ports of Yokohama and Kobe.

The Tripp was partly loaded at New Orleans, and is here to complete her cargo with naval stores. She is represented at this port by the American Shipping Corporation.

Establishment of a steamship line direct to Japan is looked upon in marine circles as a significant indication of the development of the commerce of South Atlantic ports with Asiatic countries, in which Jacksonville is to have a considerable participation.

Key West's \$1,700,000 Submarine Base.

Contract has been awarded to the Snare & Triest Company of New York to construct the Key West submarine base, this work involving building a breakwater and a number of timber piers. The marine railway, which was a part of the original project, will not be built at this time. All materials have been ordered by the contractor, and the only subcontract, that for dredging, has been awarded to the Bowers Southern Dredging Co. of Galveston. The Snare & Triest Company advises the MANUFACTURERS RECORD as above stated, and adds that the contract is partially on a unit price and partially on a lump-sum basis, the total estimated cost being \$1,700,000.

\$1,000,000 Bank and Office Building for Houston.

A 10-story bank and office building will be erected at Houston, Tex., by the Houston National Exchange Bank. It will cost from \$750,000 to \$1,000,000.

Dallas Open-Shop Policy Results in Establishment There of Southwestern Headquarters by a \$1,000,000 Company.

Dallas, Tex., January 26—[Special.]—S. F. Bowser & Co., a \$1,000,000 concern manufacturing oil tanks, pumps and storage systems, meters, oil filters and similar products, has established Southwestern headquarters in Dallas. The company's factory and general offices are at Fort Wayne, Ind. The attitude of Dallas business men in advocating the open shop is said to have been largely responsible for the company selecting this city for Southwestern headquarters.

A warehouse of 30,000 to 40,000 square feet floor space will be built or purchased here. Several building sites are being considered. The company will operate in Texas under the name of S. F. Bowser & Co. of Texas.

Another Big Manufactory for Baltimore.

The week's announcements of industrial enterprises for Baltimore includes another big manufactory to be located in the Curtis Bay district. This will be a plant for manufacturing alcohol-burning heating devices for automobiles and boats. The Sterno Corporation has been chartered with \$2,000,000 capital to build this plant, the resident director at Baltimore being Carl Haner, Jr., of the United States Industrial Alcohol Co. The new plant will be allied with the United States Industrial Alcohol Co., the United States Industrial Chemical Corporation and the Curtis Bay Copper and Iron Corporation, the capitalization of these three being \$46,000,000.

Extensive Additions to Dallas Plant.

Dallas, Tex., January 24—[Special.]—Sears, Roebuck & Co. of Texas has announced plans for the erection of a fifth unit of its plant here, costing approximately \$800,000. The original unit building of three stories will be wrecked and rebuilt to nine stories, the same height as the other four units of the plant.

Plans are being considered, according to Harry M. Rubel, vice-president and general manager, for extensive improvements which may involve the expenditure of from \$1,500,000 to \$2,000,000. The business of the company in the Southwest has grown enormously, Mr. Rubel said.

Preston Automobile Works at Birmingham.

Contracts have been awarded for the buildings and machinery of the Preston Motors Corporation, recently organized at Birmingham for the manufacture of automobiles. The main factory will be 700 feet long by 350 feet wide, of steel, concrete and reinforced glass in the saw-tooth roof construction and sides. There will also be erected a two-story building 150 feet square for electric turbine engines, another for offices and another for wash-rooms. The plant site comprises 40 acres of land on three railways, and the management proposes during 1920 to manufacture from 2500 to 3500 passenger cars, trucks and tractors.

For Manufacturing Electrical Equipment at St. Louis.

Alternating current motor and fan manufacture by the Century Electric Co., St. Louis, will be largely increased in an additional building for which the company has awarded contract. This building will be six stories high with basement, 180x106 feet, of reinforced concrete, costing \$500,000. L. B. Pendleton of St. Louis is the architect and the Stone & Webster Engineering Corporation of Boston is the engineer. The company advises the MANUFACTURERS RECORD that there will be no regular bids asked on machinery for this building, but that purchases will be arranged as needed.

Savannah Creosoting Co.'s Plans.

Further facts have been stated regarding the Savannah (Ga.) Creosoting Co., which recently announced its intention to build a large creosoting plant at Port Wentworth, near Savannah. This plant will cover about 30 acres of land and consists mostly of tanks, tracks and storage yards. The equipment to be installed will cost about \$600,000, and its annual capacity will be 100,000-000 feet board measure of lumber. S. W. Labrot of New York has been elected president, and William Minot of Savannah is vice-president.

RAILROADS

Important Bridge Completed.

Chattanooga, Tenn., January 24—[Special.]—With the opening to traffic January 20 of the new bridge of the Southern Railroad Lines (Cincinnati, New Orleans & Texas Pacific division), spanning the Tennessee River just north of Chattanooga, there was completed a remarkable mechanical achievement and a great improvement. The bridge is 1800 feet long, and is more than strong enough to carry any motive power now in service. With its completion, through service between Cincinnati, Atlanta and Florida and between Cincinnati, Birmingham and New Orleans via Chattanooga, which has been interrupted since August, was resumed, the job being completed in just five months.

The bridge consists of one truss span 310 feet long, and 14 deck girder spans. It rests on 14 piers and two abutments, the masonry being of concrete, and all of it for double track. The one-truss span, which was erected in 1917 and will be operated as a vertical lift draw, is for double track, and the two spans between it and the north abutment and two to the south of it will be placed for double track, as this was considered necessary for carrying the machinery which will operate the lift span. The other 10 spans are for single track, and, of course, the bridge will be operated as a single-track structure.

W. C. Monday of Knoxville, Tenn., was the contractor for the masonry and the grading for the approaches. The steel superstructure was fabricated and erected by the American Bridge Co. The work was done under the general direction of Chief Engineer of Construction E. M. Durham, Jr., of the Southern Railroad Lines. District Engineer R. W. Jones, Jr., had direct charge of the job, assisted by Resident Engineer P. W. Shields. Details of the steel construction were looked after by Bridge Engineer George Gilbert.

In addition to restoring through service, the completion of this bridge means that now the heaviest freight cars and locomotives can be handled into Chattanooga direct. Heretofore heavy locomotives were used to the north bank of the river and light transfer engines were there substituted for use across the bridge. It was also necessary to detour exceptionally heavy freight cars around by Knoxville. Now there will be no further need for changing engines or detouring heavy freight cars.

Railroad Development Plans.

London, Ky., January 26—[Special.]—A deal is under way for the purchase by the Louisville & Nashville Railroad of the Rockcastle River Railway, extending from East Bernstadt, in this (Laurel) county, to Bond, Jackson county, 10 miles, from the Bond-Foley Lumber Co., which constructed and has operated the road for several years in marketing the product of its mills in Jackson county. The Bond-Foley company is developing a tract of 20,000 acres of timber land in Jackson county, and its mills at Bond are among the largest in the State.

It is said to be the purpose of the Louisville & Nashville also to take over the Cumberland Railroad, a privately owned line running from Barbourville, Knox county, to Manchester, Clay county, 24 miles, in preparation for a more extensive development of the resources of Southeastern Kentucky.

The Louisville & Nashville Railroad proposes, it is learned, to establish terminals at East Bernstadt and extend the Rockcastle River Railway from Bond, by way of McKee, to a connection with the lumber-carrying railroad now running from Heidelberg, Lee county, into Owsley county, an extension of about 30 miles. This also would give the Louisville & Nashville a connection of its Knoxville branch with the Lexington & Eastern division, cutting off a long haul and opening up some undeveloped oil, coal and timber territory.

Railroad Official Changes.

James R. Pratt, a vice-president of the United Railways & Electric Co. of Baltimore, has resigned and will leave its service March 1 to take up his duties of president of the Federal Finance & Credit Co., to which post he was recently elected.

J. L. Lancaster has been elected president of the Texas & Pacific Railway Co. He was formerly vice-president and later receiver of the road.

Watauga & Yadkin May Be Extended.

Raleigh, N. C., January 24—[Special.]—The Watauga & Yadkin River Railway has been purchased by Frederick Fisk of Oil City, Pa., and the Federal Court has given him a clear title to it. The road, together with a very large tract of timber in Caldwell county at the foot of the Blue Ridge, was bought by Mr. Fisk at public sale last summer, but Chicago men made a contest in the courts. The road, which extends from North Wilkesboro to Grandin, was built by W. J. Grandin and his associates. Large lumber mills, warehouses, stores, etc., were built at Grandin. In 1916 the July flood swept away several bridges and did other damage, and the company became embarrassed financially. It was Mr. Grandin's plan to build the railway across the Blue Ridge and on to Boone, the county-seat of Watauga county. It is believed that Mr. Fisk plans to rebuild the road and operate it. Any railway which gets into Watauga county from this side of the Blue Ridge will get large traffic, that region having communication now with only Tennessee and Virginia, being isolated from the remainder of North Carolina. The road is standard-gauge and lies alongside the Yadkin River, its length being 24 miles. It is now at the very foot of the Blue Ridge.

Estimating as to Electric Motive Power.

A report from Birmingham says that the Alabama Power Co. has made estimates with a view to the ultimate electrification of the Louisville & Nashville Railroad between Nashville, Birmingham and Montgomery, and also on the Alabama Mineral division of that system, altogether about 600 miles of line. The railroad company is said to be considering the advantages which might be gained by adopting electricity for motive power, this to be supplied from big hydro-electric plants now situated adjacent to its road. There is no contract made nor does it, according to the reports, appear that a contract will be closed at any early date, but the fact that the Chicago, Milwaukee & St. Paul Railway has met with so much success in the operation of its transcontinental trains over the Rocky Mountains by means of electricity has stimulated interest generally among railroaders to investigate the merits of the new power and to consider its possible adoption whenever operating and financial conditions should make it necessary to do so.

Belt Line Wanted at Macon.

Plans for the construction of a belt line railroad to serve new industries at Macon, Ga., are under consideration by the Chamber of Commerce there, the transportation committee, of which H. C. Fowler is chairman, being authorized to appoint a survey committee. It appeared at a meeting of the Chamber of Commerce that there are 15 or 20 industries which contemplate locating at Macon, but are not quite satisfied with the present transportation arrangements. The committee will set about improving facilities to attract more industries.

New Equipment.

Missouri, Kansas & Texas Railway is reported in the market for 40 locomotives, viz., 20 Mikado type, 10 Pacific and 10 eight-wheelers.

Alabama Power Co., Gadsden, Ala., has ordered 2 street cars from the American Car Co., St. Louis.

Stevensville-Desdemona Oil Railway has ordered two oil-burning locomotives from the Bell Locomotive Works, Yonkers, N. Y., and the same builders also have an order for two engines from the West Construction Co. of Knoxville, Tenn.

Davidson Chemical Co. of Baltimore is reported inquiring for 20 ore cars of 50 tons capacity.

Missouri, Kansas & Texas Railway is reported in the market for 58 passenger cars, and the Missouri Pacific for 10 passenger cars and 20 baggage and express cars.

Tennessee Coal, Iron & Railroad Co. is reported getting prices preliminary to an order for 20 coke cars of 50-ton capacity.

El Paso & Southwestern Railway has ordered five Mikado-type engines from the American Locomotive Co.

The Material Handling Machinery Manufacturers' Association announce that it has been necessary to change the date of their convention in New York from January 29-30 to February 26-27.

TEXTILE

Hamilton-Carhartt Cotton Mills' Additions.

Outlining final decisions for enlargements, the Hamilton-Carhartt Cotton Mills of Rock Hill, S. C., writes to the MANUFACTURERS RECORD:

"The improvements at Mill No. 2 at Carhartt consist of doubling present building and installing 6000 spindles and 200 looms, together with other necessary machinery. This will necessitate building 30 cottages with the usual water and sewer system. We are building a store for our community; also adding 70 feet to our cotton warehouse. At No. 1 in Rock Hill we will enlarge dyehouse. Recently we acquired a new block of tenant houses, which we will repaint and put in good shape all around, installing modern bathroom fixtures, etc. We are also adding 1600 spindles and 40 looms to Mill No. 1."

Navarro Cotton Twine Mill.

The Navarro Manufacturing Co., Corsicana, Tex., recently incorporated, has organized with \$200,000 capital and these officers: R. P. Wofford, president, Dallas; William C. Clarkson, Jr., vice-president; S. W. Rabb, secretary-manager; J. S. Cain, treasurer; each of Corsicana. H. O. Blanding of Corsicana is the engineer-architect and his plans provide for \$60,000 mill-construction buildings 160x72 feet and 50x40 feet. A \$100,000 mill equipment will be installed, including 2500 spindles, with \$6000 electric power plant and belt drive, for daily capacity 2500 pounds of cotton twine. About 40 operatives will be employed. All contracts have been awarded.

Mercerizing Plant Contracts Totaling \$700,000.

Plans and specifications have been completed for the plant of the Dixie Mercerizing Co., Chattanooga, Tenn., heretofore mentioned as incorporated with a capital of \$750,000. They provide for buildings costing \$300,000 and machinery costing \$400,000, all contracts having been awarded. There will be two mill buildings, 375x100 feet, of reinforced concrete construction, to be equipped with mercerizing machinery, including electric-power drives. Lockwood, Greene & Co. of Boston and Atlanta are the architects-engineers.

Will Knit Women's Silk Hose.

Silk hose for women will be knit at New Orleans by the Floral-del Knitting Mills, organized with \$50,000 capital. This company's officers are: Charles A. Kaufman, president; Arthur I. Kaufman, vice-president; Harold B. Kaufman, secretary-treasurer. Contracts have been awarded to the Home Construction Co. for erecting the mill building according to plans and specifications by Emile Weil.

Rhyne-Anderson Yarn Mill.

Organization has been perfected by the Rhyne-Anderson Mills Co., Troy, N. C., recently incorporated. This new enterprise is capitalized at \$200,000, and its officers are: President, E. O. Anderson of Charlotte; vice-president, D. E. Rhyne of Lincolnton, N. C.; secretary, H. C. Long, Jr., of Troy. The company will install 5000 spindles and employ 80 operatives for manufacturing yarns.

\$750,000 Cotton Mill Village Improvements.

The Proximity Manufacturing Co., Greensboro, N. C., will expend \$750,000 for improvements to its villages of the Revolution, Proximity and White Oak cotton mills. These improvements will consist principally of the construction of complete sewer system, street paving and sidewalks.

Newton Woolen Mills Chartered.

Woolen cloth will be manufactured by the Newton (N. C.) Woolen Mills. This company has been chartered with \$100,000 capital by W. E. Bacon, A. B. Kuhn and G. D. Winecoff.

A branch plant will be established at Dunn, N. C., by the Durham (N. C.) Hosiery Mills.

Textile Mill Notes.

Charles H. Eyster, Albany, Ala., will build a silk mill.

The California-Missouri Woolen Mills will enlarge and improve plant.

An addition will be built by the Lockmore Cotton Mill Co., York, S. C.

J. Hampton Adams and Robert R. Reagan, High Point, N. C., will build a cotton-yarn mill.

The Saluda Manufacturing Co., Greenville, S. C., has increased capital from \$35,000 to \$250,000.

Thurlow Kearns, High Point, N. C., will organize a \$100,000 company to build a cotton-yarn mill.

An additional plant, the cost to be \$30,000, will be built by the Paul Knitting Mills Co. of Radford, Va.

An increase of capital from \$75,000 to \$200,000 has been announced for the Riverdale Mills, Greenville, S. C.

Clifton Corley and associates have incorporated the Corley Cotton Mills, Fayetteville, N. C., with \$500,000 capital.

Samuel S. Shuford, Gastonia, N. C., will organize a \$200,000 company to build a 5000-spindle mill for fine combed yarn.

An increase of capital from \$300,000 to \$500,000 has been announced for the Lowe Manufacturing Co., Huntsville, Ala.

From \$200,000 to \$3,000,000 is an increase of capital announced for the Mobile Cotton Mills at Crichton, near Mobile, Ala.

W. H. Adams, J. R. Spencer and A. G. Ayers have incorporated the Adams-Spencer Yarn Mills, Gastonia, N. C., with \$400,000 capital.

A. Alexander Shuford, Hickory, N. C., will organize a \$500,000 company to build a cotton yarn mill. The equipment of machinery has been ordered.

An increase of capital from \$189,000 to \$200,000 has been announced for the Melville Mills, Cherryville, N. C., and the company will build an addition.

A \$10,000 to \$12,000 additional building will be erected for the Richmond Hosiery Mills at Chattanooga, Tenn. Mark K. Wilson has the building contract.

The Darlington (S. C.) Manufacturing Co., manufacturer of shirts, will install electric generator and 40 motors for individual drives. J. E. Sirrine, Greenville, S. C., is the architect and engineer.

An increase of equipment to the extent of 25,000 spindles and 400 60-inch looms is planned by the Standard Textile Products Co. of New York for its cotton mill at McComb, Miss. Its installation will be provided for in a 175x95-foot additional building which the company will erect for the McComb mill.

The Alsace Manufacturing Co., Rock Hill, S. C., recently incorporated, has organized with \$250,000 capital, and C. E. Hutchinson is president. This company succeeds the Mount Holly Mills. It will build an addition and remodel present structure, J. A. Gardner of Charlotte being the contractor. W. O. Pratt of Mount Holly is the architect and engineer.

The Cotton Movement.

In his report of January 24, 1920, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 176 days of the season was 8,386,544 bales, an increase over the same period last year of 704,676 bales. The exports were 3,593,324 bales, an increase of 1,185,415 bales. The takings were, by Northern spinners, 1,483,149 bales, an increase of 130,463 bales; by Southern spinners, 2,711,566 bales, a decrease of 109,379 bales.

Alabama Power Co. Plans.

Referring to recent reports that the Alabama Power Co. of Birmingham is planning additional hydro-electric developments, W. E. Mitchell, assistant general manager, writes to the MANUFACTURERS RECORD:

"We are, as usual, studying various projects for future developments. We have nothing to report on these propositions at the present time. Glad to keep you advised when any work takes definite form so that we can give information to the public."

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Ark., Little Rock.—Pulaski County Comms. Broadway-Main Street Bridge Dist., Justin Matthews, Secy., Southern Trust Bldg.; construct 2 reinforced concrete arch bridges across Arkansas River at Main and Broadway Sts.; 18 reinforced arch spans, with roadway 40 ft. wide; 1700 lin. ft. approaches; 61,500 cu. yds. concrete; 3,300,000 lbs. reinforcing steel; sidewalks; bids until Mch. 2; Luten, Roberts & Titus, Consult. Engrs., Indianapolis, Ind.; Hedrick & Hedrick, Consult. Engrs., 506 Interstate Bldg., Kansas City, Mo. (See Machinery Wanted—Bridge Construction.)

Mo., Sedalia.—Pettis County Comms.; construct bridges; vote Feb. 17 on \$50,000 bonds.

Okla., Norman.—Deluxe Bridge Co. inceptd.; capital \$150,000; J. B. Phillips, Norman; H. F. Mitchell, Ft. Worth, Tex.; J. W. Pigg, Weatherford, Tex.

S. C., Edgefield.—Edgefield County Comms.; construct 60-ft. span reinforced concrete bridge over Log Creek; \$12,000; General Road and Drainage Constr. Co., Contr., Columbia, S. C.; State Highway Dept., Engr., Columbia, S. C.

S. C., Hodges.—Greenwood County Highway Comsn., E. I. Davis, Secy., 201 National Bank Bldg., Greenwood, S. C.; construct Mulberry Creek bridge over Mulberry Creek; two 40x18-ft. reinforced concrete spans, 11 ft. high; rock foundation; 282.4 cu. yds. concrete; \$16,000; Atlantic Bridge Co., Contr., Charlotte, N. C.; B. R. Cowherd, Jr., Engr., Greenwood, S. C. (Lately noted inviting bids.)

S. C., Ware Shoals.—Greenwood County Highway Comsn., E. I. Davis, Secy., 201 National Bank Bldg., Greenwood, S. C.; construct Turkey Creek Bridge across Turkey Creek; three 40x18-ft. reinforced concrete spans, 13 ft. high; pile foundation; 391.3 cu. yds. concrete; 1440 lin. ft. piles; 18-ft. roadway; \$17,000; Atlantic Bridge Co., Contr., Charlotte, N. C.; B. R. Cowherd, Jr., Engr., Greenwood, S. C. (Lately noted inviting bids.)

Tex., Angleton.—Brazoria County Comms.' Road Dist. No. 23, L. Mims, Chrmn., Freeport, Tex.; construct creosoted pile bridge across Freeport drainage canal and steel bridge with creosote pile substructure across Jones Creek, including 10 mi. Quintana Rd. to Jones Creek; \$156,000. (See Road and Street Construction.) Machinery.)

Tex., Groesbeck.—Limestone County, J. E. Bradley, County Judge; construct bridge over Navasota River; steel and concrete; 88,000 lbs. structural steel; bids until Jan. 29; Fred P. Holt, Engr., Mexia, Tex. (See Machinery Wanted—Bridge Construction.)

Canning and Packing Plants.

Ala., Montgomery.—Leslie D. Fairchild, Mgr. Exchange Hotel; plans cannery for green peas, tomatoes, corn, okra, string beans and sweet potatoes; wants plans for building. (See Machinery Wanted—Canning Machinery.)

Ga., Griffin.—Pomona Products Co., Walter L. Graefe, Gen. Mgr., Pomona, Ga.; erect \$15,000 building; install \$10,000 canning mch. (Lately noted.)

La., Lafayette.—Hy. J. Boudreaux, Box 44; establish cannery.

Tenn., Columbia.—G. A. Nagles, Paducah, Ky.; plans erection \$100,000 cannery.

Tenn., Graysville.—Walden's Ridge Improvement Assn., Jno. C. Leggett, Gen. Mgr., Chattanooga; build fruit cannery.

Tenn., Sales Creek.—Walden's Ridge Improvement Assn., Jno. C. Leggett, Gen. Mgr., Volunteer Bldg., Chattanooga; build fruit cannery.

Va., Atkins.—John C. Moomaw Co., Roanoke, Va.; rebuild burned kraut factory; loss \$18,000.

Clayworking Plants.

La., Lake Charles.—Fancy Brick, etc.—Builders' Products Co.; establish \$100,000 plant to mf. fancy face brick, tile roofing, wall board, wainscoting, etc.

Md., Baltimore.—Bricks.—Baltimore Brick Co., Highland Ave. and Monument St.; build 1-story 158x57-ft. addition; install dryer equipment.

Md., Baltimore.—Porcelain Products.—Locke Insulator Co., Victor, N. Y.; build plant to manufacture porcelain for electrical insulation; 24 kilns; 15-acre water-front site; expend \$1,000,000 to \$1,500,000.

Miss., Corinth.—Bricks.—Corinth Brick Co.; install 6-tunnel drying equipment; add mch. to increase capacity.

N. C., Lillington.—Bricks.—Lillington Brick Co. organized; Geo. M. Norwood, V.-P. and Gen. Mgr., Goldsboro, N. C.; erect building; mch. ordered; daily output 100,000 building bricks. Lately noted inceptd., capital \$100,000. (See Machinery Wanted—Rails; Cars; Engine.)

S. C., Camden.—Bricks.—J. L. Juy Lumber Co.; build brick works.

S. C., Laurens.—Bricks.—R. F. Fleming, H. M. Franks; establish brick works.

Tex., Eastland County.—Pottery.—Thurber Earthen Products Co. organized; Ed S. Britton, V.-P. and Gen. Mgr., Thurber, Tex.; construct \$275,000 rock-crusher plant; hourly

capacity 100 tons; mch. equipment ordered; Preston K. Yates, Archt.-Engr., 120 Broadway, New York. (Lately noted inceptd., capital \$600,000.)

Coal Mines and Coke Ovens.

Ky., Freeburn.—Hurricane Mineral Crop. chartered; capital \$15,000; W. W. Walker, H. G. Van Hoose, W. A. Dotson.

Ky., Lexington.—John B. Jewel Co.; increase capital from \$12,000 to \$100,000.

Tex., Eagle Pass.—Dr. R. R. James, Prest. Arkansas Hydro-Electric Development Co., Cotton Plant, Ark.; purchased mine; install electrical machinery.

W. Va., Beckley.—C. H. Mead Coal Co. inceptd.; capital \$60,000; C. H. Mead, J. F. Nowlin; both Beckley; W. B. Parks, Killarney, W. Va.

W. Va., Follansbee.—Follansbee Coal Gas Co. inceptd.; capital \$150,000; J. J. Walker, G. S. Irish; both Follansbee; J. J. Arnold, Washington, Pa.

W. Va., Greenbrier County.—Frances Coal Co. inceptd.; capital \$100,000; Quin Morton, W. S. Wood, George S. Couch; all Charleston, W. Va.

W. Va., Wheeling.—Auto Coal Co. inceptd.; capital \$25,000; J. D. and J. B. Hall; both Wheeling; Alfred M. McConnell, Moundsville, W. Va.

Cotton Compresses and Gins.

Ark., Ashdown.—Newburger Cotton Co., Memphis, Tenn.; build \$100,000 cotton compress plant; storage capacity 10,000 bales.

N. C., Rutherfordton.—Rutherfordton Gin & Oil Co. inceptd.; capital \$100,000; M. L. Justice, R. L. Hampton, C. D. Geer.

Tex., Deport.—Farmers' Gin Co. organized; Wm. Hammond, Mgr.; plans erection 24x60-ft. wooden building; install 3-gin stands; \$30,000 equipment; daily capacity 100 bales. (Lately noted inceptd., capital \$11,300.)

Tex., Hobson.—Hobson Gin & Milling Co. inceptd.; capital \$18,000; R. J. Polasek, W. H. Howard, E. J. Kainer.

Tex., Houston.—Japan Trading Co., H. Yamada and T. Yasui, representatives, Fort Worth, Tex.; construct 50,000-bale warehouse and compress; \$500,000.

Cottonseed-Oil Mills.

N. C., Rutherfordton.—Rutherfordton Gin & Oil Co. inceptd.; capital \$100,000; M. L. Justice, R. L. Hampton, C. D. Geer.

S. C., Iva.—Iva Oil Co. inceptd.; capital \$10,000; T. C. Jackson, I. E. Wiles.

Drainage Systems.

La., Opelousas.—Bayou Boeuf & Waxia Drainage Dist., care Police Jury; drain 61,750 acres; voted \$50,000 bonds.

Miss., Louisville.—Tallahaga Drainage Dist., Winston County, W. E. Bennett, Secy.; construct main canal and 4 laterals; 17.74 mi.; 821,090.8 cu. yds. earth excavation; clear 210.4 acres right of way; bids until Feb. 7; F. A. Livingston, Engr. (See Machinery Wanted—Drainage System.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Electric Plants.

Ky., Georgetown.—City; plans electric-light, power plant and water-works improvements; \$100,000 bonds. Address The Mayor.

Ky., Springfield.—Springfield & Campbellsville Utilities Co. Inceptd.; capital \$150,000; H. Thurman, L. A. Burns, G. C. Wharton.

La., Broussard.—Village, L. J. Morvant, Mayor; votes Feb. 24 on \$8000 bonds to construct electric lighting system.

La., Kaplan.—City, Eugene Eleazar, Mayor; improve light and water systems; \$40,000 bonds.

Miss., Belzoni.—Town; improve light and water plants; pave streets; vote Jan. 29 on \$275,000 bonds. Address The Mayor.

Mo., Ash Grove.—Ash Grove Light & Power Co.; rebuild burned electric plant; loss \$30,000.

Mo., Sweet Springs.—City, J. J. Smith, Mayor; enlarge and improve electric-light and power plant; vote Feb. 3 on \$15,000 bonds. Lately noted under Sweet Water. (See Machinery Wanted—Engine; Generator.)

Mo., Sweet Springs.—City, J. J. Smith, Mayor; plans additions to light plant; vote Feb. 3 on \$20,000 bonds. (Supersedes recent item.)

N. C., Murfreesboro.—Chowan Ry. & Power Co.; build electric generating station for railway, Orlando, N. C., to Franklin, Va. (See Machinery Wanted—Electrical Equipment; Rails.)

Okla., Norman.—W. R. Gater, City Mgr.; construct \$125,000 electric-light plant and distribution system; 900 H. P. Lately noted (See Machinery Wanted—Electric-power Plant.)

Okla., Okemah.—City, E. W. Baker in charge; contemplates improvements to electric-light plant; install two 100 H. P. boilers, two 125 and 175 H. P. engines, generator from 75 to 125 K. W.

N. C., St. Pauls.—St. Pauls' Power Co. incorporated; capital \$250,000; A. R. McEachern, J. M. Butler, W. D. Johnson.

Okla., Stroud.—Town, W. A. Hadley, Mayor; improve electric-light plant; \$20,000 to \$25,000; 300 H. P.; install 125 to 150 H. P. oil engine and 90 to 125 K. W. 3-phase 60-cycle 2300-volt generator. (See Machinery Wanted—Generator; Ice Plants.)

Okla., Stroud.—Town, W. A. Hadley, Mayor; \$20,000 to \$25,000 improvements to electric-light plant; extensions in city; develop 300 H. P.; install 100, 125 or 150 K. W. generator with gas or oil engine. (See Machinery Wanted—Generator.)

S. C., Anderson.—Geo. W. Smith, R. F. D. No. 3; contemplates installing A. C. electric plant, generating 25 to 40 H. P. (See Machinery Wanted—Electrical Equipment.)

Tex., Cason.—Cason Electric Light & Power Co. Inceptd.; capital \$3000; J. W. Cason, J. C. Tidwell, J. W. Wardlow, Jr.

Tex., Kenedy.—Kenedy Light & Power Co.; rebuild power plant.

Fertilizer Factories.

Ark., Ashdown.—United Oil Mills; rebuild burned fertilizer plant.

Flour, Feed and Meal Mills.

Ga., Smithville.—Twentieth Century Roller Mills, J. W. McDonald, Prop.; plans addition; construct flour mill; install 50-bbl. roller mch.; overhaul and improve corn-grinding mch.; meal, flour and feedstuffs.

Ky., Louisville.—Bingham-Hewitt Grain Co. Inceptd.; \$100,000 capital; Henry B. Hewitt, Louisville; Harry H. Bingham, Indianapolis, Ind.

Md., Chestertown.—Radcliffe Flour Mills; double 100-bbl. daily output.

Mo., Clinton.—Larabee Flour Mills Corp., care Mr. Schneider, Ch. Engr., St. Joseph, Mo.; build 30,000-bu. capacity grain elevator and storage tanks; reinforced concrete; composition roofing; drawing plans.

N. C., Charlotte.—Interstate Milling Co.; increased capital from \$100,000 to \$500,000.

N. C., Hickory.—Horseford Milling Co., R. M. and Oscar Pitts, Props.; erect \$50,000 flour mill; daily capacity 100 bbls.

Okla., Earlsboro.—Earlsboro Milling Co. Inceptd.; capital \$50,000; E. Kennedy, H. Lattison, D. W. Davis.

Okla., Forgan.—Farmers' Mill & Elevator Co. Inceptd.; capital \$15,000; P. N. Mayo, W. L. Beardsley, F. H. Schlicht.

Okla., Hennessey.—Farmers' Elevator & Co-operative Assn. Inceptd.; capital \$50,000; Joseph Franks, N. L. Brown, Henry Ludwig.

Okla., Hugo.—Modern Milling Co. Inceptd.; capital \$60,000; R. V. Womack, L. McLennox; both Hugo; W. H. Dancer, Boswell, Okla.

S. C., Walterboro.—Colleton Products Assn., E. T. H. Shaffer, Prest.; build 15,000-bu. corn elevator, grists and feed mill; cost, including machinery, \$15,000; W. F. Brandon, Contr., Mariana, Fla. (Lately noted.)

Tenn., Centerville.—Duck River Milling Co., H. S. O'Connor, Mgr.; erect 90x40-ft. building costing \$4000; install 20-bbl. flour mill, 100-bu. corn mill, 5-ton ice plant and bottling works; Anglo-American Mill Co., Archt., Owensboro, Ky.; J. F. Porter, Bldg. Contr., Centerville; P. I. Lucas, Mch. Contr., Roanoke, Va. Lately noted Inceptd., capital \$10,000. (See Machinery Wanted—Flour Mill; Corn Mill; Ice Plant; Bottling Machinery.)

Tenn., Knoxville.—Victor H. McLean; plans erection 75x150-ft. mill addition; install electrically driven mch.

Tex., Kingsville.—Kingsville Ice & Milling Co. organized; Robert Driscoll, Prest.; M. Nuckols, Secy. and Gen. Mgr.; erect 5000-bu. storage capacity grain elevator; 15-ton capacity ice plant; brick and iron construction. (Previously noted Inceptd., capital \$50,000.)

Va., Walters.—J. R. Cox; build grist mill for corn. (See Machinery Wanted—Grist-mill equipment.)

Foundry and Machine Plants.

Ala., Anniston.—Iron Foundry, etc.—Ajax Foundry & Machine Co. organized; capital \$125,000; Frank G. Carrington; build foundry and machine plant.

Ala., Anniston.—Cast-Iron Pipe.—Central Foundry Co., E. P. Cooper, Mgr.; erect 120x200-ft. plant addition; install machinery; \$20,000; Ogletree Construction Co., Contr.

Ala., Birmingham.—Castings.—Dixie Brass & Foundry Co., Chas. Wegelin, Mgr., 1231 6th Ave.; erect 50x60-ft. building; mill construction; \$3500; install cupola, pressure blower, rumbler, elevator, crane; \$5000; purchased; daily output 5 to 10 tons gray-iron castings; Mann Bros., Contrs.

Ark., Little Rock.—Safety Cranks.—Berg Safety Crank Co.; increased capital from \$25,000 to \$60,000.

D. C., Washington.—Machine Shop, etc.—Vasil Steam Systems Co., H. W. Goddin, Mgr., 314 Washington Loan & Trust Bldg.; erect 1-story, 40x200-ft. foundry and machine shop. (Supersedes recent item.)

Fla., Jacksonville.—Engines.—Armstrong-Emley Crankless Engine Co., 235 W. Adams St., organized; capital \$2,500,000; J. E. Emley, E. A. Armstrong; mfr. crankless 2-cylinder stationary steam engine.

Md., Baltimore.—Steel Garages, etc.—C. D.

Pruden Co., Warner and Dock Sts.; enlarge plant; mfr. garages and small cottages.

Md., Baltimore.—Heaters.—Hunter Heater Co., St. Paul and 26th Sts., Inceptd.; capital \$100,000; John D. Hunter, Wm. E. Bonn, Geo. L. Henck.

Md., Baltimore.—Electrical Machinery.—Reus Electric Equipment & Battery Co., 154 W. Mount Royal Ave., Inceptd.; capital \$100,000; Burkhardt and John F. Reus, Jr., S. Wilson Morrow; mfr. electrical equipment.

Mo., St. Louis.—Bakers' Machinery.—American Bakers' Machinery Co., 2121 N. 9th St.; erect plant building; 60,000 sq. ft. floor space; E. C. Jansen, Archt.-Engr., Chemical Bldg. (Previously noted to erect.)

Mo., St. Louis.—Electric Motors.—Century Electric Co., R. J. Russell, Secy., 1827 Pine St.; erect 6-story and basement 180x106-ft. reinforced concrete building; \$500,000; L. B. Pendleton, Archt., Central National Bank Bldg., St. Louis; Stone & Webster Engineering Corp., Engr., Boston, Mass. (Supersedes recent item.)

Mo., St. Louis.—Lead.—National Lead Co., 5550 Manchester Ave.; construct 1-story 4x57½-ft. concrete furnace-room; concrete flooring and pits; concrete bunker; Chaplaine Constr. Co., Contr., Post-Dispatch Bldg.

Mo., St. Louis.—Refrigerators.—Hussman Re-crete and brick; reinforced concrete flooring; A. Meyer, Archt., Central National Bank Bldg.; A. H. Haessler Building & Constructing Co., Contr., Wainwright Bldg. (Previously noted to erect.)

Mo., St. Louis.—Electric Motors.—Century Electric Co., E. S. Pillsbury, Prest., 1827 Pine St.; erect 6-story 90x120-ft. reinforced concrete and steel factory; concrete floor and foundation; L. D. Pendleton, Archt., Demeini Bldg., St. Louis; Stone & Webster, Contrs. 12½ Broadway, New York. (Lately noted to erect.)

S. C., Greenville.—Iron Foundry.—Greenville Iron Works, W. Lindsay Wilson, Mgr.; erect \$50,000 plant; 2 buildings; sheet iron and steel construction; machine shop, 7000 sq. ft. floor space; foundry building 8500 sq. ft.; purchased machinery; daily output 18 tons.

S. C., Rock Hill.—Repair Shop.—J. C. Hardin & Co.; erect 60x140-ft. truss steel bldg.; construction by owner; \$12,000; install planer, shaper, moulder. (See Machinery Wanted—Machine Tools.)

Tenn., Chattanooga.—Boilers, etc.—Lookout Boiler & Mfg. Co. (lately noted Inceptd., capital \$100,000) organized; erect 100x200-ft. fireproof, structural-steel building; construction by owner; install mch. to mfr. boilers, tanks, towers, plate and sheet-metal work. (See Machinery Wanted—Metal-working Machinery.)

Tenn., Memphis.—Brakes.—Perfect Stop Compression Brake Co. Inceptd.; capital \$100,000; James Able, Prest., Nashville, Tenn.; John Guthrel, V.-P., Memphis.

Tenn., Memphis.—Boilers and Tanks.—Chris. Rehkoph Boiler & Tank Works; W. W. Foley, Chris. Rehkoph, Jr.; establish boiler and tank works.

Tex., Amarillo.—Machine Shop.—Johnston Bros.; erect 60x80-ft. brick building; hollow fireproof tile; composition roofing; cement and hardwood floors; \$8100; L. A. Kerr, Archt.; Cooper & Kerr, Contrs.

Tex., Dallas.—Saw Trimmer.—Miller Saw Trimmer Co. of Texas Inceptd.; capital \$5000; F. E. Nichols, P. C. Dunlevy, W. H. Smith.

Tex., Dallas.—Machinery.—Domas-Hall Machine Shops; increased capital from \$2000 to \$12,000.

Tex., Houston.—Rock Drill Bits.—Hughes Tool Co.; erect \$20,000 machine shop.

Va., Richmond.—Gas Appliances.—Mexico Gas Appliance Co. chartered; capital \$25,000; Geo. W. Rhodes, Secy.

Va., Roanoke.—Machinery.—Walker Machine & Foundry Corp. chartered; \$25,000; Chas. M. Walker, Prest.; J. W. J. Goff, Secy.

W. Va., Charleston.—Repair Shops.—Nicholas P. Perkins, Inc., chartered; capital \$30,000; N. P. Perkins, L. A. Tinder, Calvin C. Redden.

W. Va., Mannington.—Oil-well Tools.—Phillips Tool Co.; erect plant additions; mfr. oil-well tools and machinery; install machinery; more than double capacity.

W. Va., Sistersville.—Boilers, etc.—Sistersville Tank & Boiler Works, W. H. Reitz; erect 65x150-ft. building; steel construction; \$30,000; install \$40,000 mchy. (Lately noted to erect.)

Gas and Oil Enterprises.

Ky., Frankfort.—Salyersville Oil Co. inceptd.; Ga., Rome.—Gas Plant.—Rome Municipal Gas Co., F. J. Cahill, Mgr.; improve plant; install high-pressure system.

capital \$10,000; Milton Elliott, Jas. A. Scott, T. B. McGregor.

Ky., Louisville.—Ken-Pa Oil & Gas Co. incorporated; capital \$50,000; E. L. and F. E. Jones, C. E. Grant.

Ky., Paducah.—Lindsey-Brown Oil Co. incorporated; capital \$100,000; H. R. Lindsey, V. A. Johnson, W. A. Nichol.

Ky., Paintsville.—Ken-Mo Oil & Gas Co. incorporated; capital \$350,000; Fred Meade, T. P. Hornsby, J. E. Winfield.

Ky., Scottsville.—Kymo Oil & Development Co. inceptd.; Robert C. Day, Thos. F. Velich, M. D. Flavin.

Md., Baltimore.—Hunter Oil & Gas Co. chartered; \$100,000 capital; Frank E. Welsh, Jr., 2 E. Lexington St.

Miss., Oxford.—North Mississippi Oil & Development Co. inceptd.; capital \$100,000; C. A. McCharen, Lee Baggett, Sr., Joe A. Parks.

Mo., St. Louis.—Missouri, Kentucky & Tennessee Petroleum Co. inceptd.; capital \$375,000; T. A. Shelton, J. R. Thomas, C. K. Pratte.

Okla., Chickasha.—Trammell Oil Co. incorporated; capital \$25,000; Clark W. Trammell, E. C. Hall, F. L. Slusher.

Okla., Oklahoma City.—Bessemer Oil Corp. chartered; capital \$5,000,000; C. E. Stalker, Prest.; August J. Bolte, V.-P. and Gen. Mgr.; 5,000 acres leased in Oklahoma, Kansas and Texas.

Okla., Okmulgee.—W. O. N. Oil & Gas Co. inceptd.; capital \$30,000; Elwood Taylor, W. J. West, W. O. Nobiling.

Okla., Tulsa.—Offset Oil Co. No. 1 inceptd.; capital \$100,000; W. E. Worley, Tulsa; Geo. T. Griest, J. Sorlin.

Tex., Anglo.—Texas Oil Co. inceptd.; capital \$4,000,000; Cornelius A. Cole, Huckensack, N. J.; Robert A. Van Voorhis, Jersey City, N. J.; Arthur R. Oakley, Pearl River, N. Y.

Tex., Lufkin.—Lufkin Oil Co. inceptd.; capital \$250,000; Claude A. Burke, Prest.; has 10,000 acres land.

Tex., Baird.—Texas-Midland Petroleum Co. inceptd.; capital \$50,000; B. L. Russell, E. C. Pretz, C. R. Spence.

Tex., Humble.—Humble Lease & Development Co. inceptd.; capital \$100,000; T. C. Harrington, M. N. Locher, J. N. Powell.

Tex., San Antonio.—Bexata Oil Co. inceptd.; capital \$75,000; H. A. Thompson, Jr., B. M. Hixson, T. W. Masterson.

W. Va., Charleston.—Hamrick Oil & Gas Co. inceptd.; capital \$50,000; J. E. Springston,

Charleston; G. C. Irwine, Arden, W. Va.; P. A. Hamrick, Vaughn, W. Va.

W. Va., Morgantown.—Roger Oil Co. inceptd.; capital \$500; David B. Roger, Joseph K. Buchanan, C. M. Lemley.

W. Va., Point Pleasant.—Prospect Oil & Gas Co. inceptd.; capital \$100,000; M. G. Tyler, Homer Smith, J. T. Beale.

W. Va., Sutton.—Central Oil & Gas Co. incorporated; capital \$50,000; F. D. and J. Stalnaker, Fred L. Fox.

Hydro-Electric Plants.

Ala., Birmingham.—Alabama Power Co., W. E. Mitchell, Asst. Gen. Mgr., writes to Manufacturers Record: We are, as usual, studying various projects for future development; nothing to report on these propositions at present. (Refers to reports the company proposes to build additional hydro-electric plants.)

Mo., Eminence.—J. E. Bennett, Springfield, Mo.; build dam across Current River; install electrical copper smelter; lay railroad; estimated cost \$250,000; contemplated.

Va., Riverton Junction.—Shenandoah Valley Milling Co., C. E. Sheahan, Gen. Mgr., Front Royal, Va.; Albert M. Quick, Prest. and Ch. Engr., 418 Equitable Bldg., Baltimore, Md.; construct 1600 H. P. hydro-electric plant on Shenandoah River; install 800 H. P. mchy.; J. E. Lane & Co., Contrs., Altavista, Va.; H. P. Quick, Const. Engr., 35 Nassau St., New York; F. M. Richey, Res. Engr., Front Royal, Va. (Lately noted.)

Ice and Cold-Storage Plants.

Ala., Birmingham.—Central Ice Co.; erect ice plant; brick building.

Ala., Florence.—Citizens' Co-operative Ice & Coal Co. inceptd.; capital \$60,000; R. T. Simpson, W. S. Estep, J. F. Koonce; erect ice plant.

Fla., Bonifay.—Bonifay Ice & Cold Storage Co.; establish ice plant. (Previously noted inceptd., capital \$10,000.)

Fla., Graceville.—J. M. Kirkland; interested in establishment of ice and cold-storage plant.

Fla., Sarasota.—Sarasota Ice & Cold Storage Co. inceptd.; capital \$50,000; H. W. Lind, Prest.; L. S. Styles, Gen. Mgr.

Ga., Fitzgerald.—Fitzgerald Ice Co.; increase capacity cold-storage plant.

Ga., Newman.—Coweta Fuel & Ice Co.; purchased established plant; improve and install equipment.

Ga., Savannah.—City; install cold-storage dept. in market building; remodel market; issue \$250,000 bonds. Address The Mayor.

Ga., Washington.—Pope Mfg. Co.; remodel ice plant; install machinery.

Ky., Ashland.—Lobaco Ice Co., Louisa, Ky.; erect 1-story 70x108-ft. ice plant; brick walls; stone trimmings; concrete, fireproof construction; wood roof; steel beams; day labor; J. W. King, Archt., Gaylord Bldg.

Ky., Buckhorn.—Witherspoon College Trustees; install ice plant.

Miss., Cleveland.—Home Light & Ice Co.; install 600-ton ice-making machine; purchased.

Miss., Jackson.—Seale-Lily Ice Cream Co.; install 9-ton vertical single-acting belt driven enclosed type refrigerating machine; purchased.

Miss., Webb.—Webb Milling Co.; install 6-ton raw water ice plant; purchased.

Mo., Center.—Ralls County Mercantile Co.; erect ice plant; contemplated.

Mo., Marionville.—Marionville Cold Storage Co.; double plant capacity; has plans.

Mo., St. Louis.—St. Louis Dressed Beef Co.; install 600-ton ice making machine; purchased.

Mo., Kansas City.—Armour & Co., main office, Chicago, Ill.; install 600-ton ice machine in packing-house; purchased.

Mo., Poplar Bluff.—Poplar Bluff Ice & Fuel Co.; erect plant; double ice-storage capacity; increase daily output from 75 tons to 90 tons. (Lately noted increasing capital from \$35,000 to \$100,000.)

Mo., Van Buren.—J. E. Cole; erect ice plant.

N. C., Benson.—Chamber of Commerce; establish ice plant; \$35,000; has plans.

N. C., Warrenton.—City; improve and erect additions to ice plant; voted \$5000 bonds. Address The Mayor.

Okla., Conway.—Citizens' Ice & Fuel Co.; erect 35-ton ice plant addition.

Okla., Shawnee.—Shawnee Ice Co.; install 17½-ton ice and refrigerating plant; purchased.

Okla., Tulsa.—Tulsa Cold Storage Co.; install 75-ton ice plant; purchased.

S. C., Andrews.—Andrews Ice & Fuel Co. inceptd.; capital \$10,000; W. H. Andrews of Andrews, P. F. and G. E. Doyle; both of Georgetown, S. C.

Tenn., Centerville.—Duck River Milling Co., H. S. O'Connor, Mgr.; install 5-ton ice plant. See Flour, Feed and Mill Mills. (See Machinery Wanted—Ice Plant.)

Tenn., Knoxville.—Knoxville Ice & Cold Storage Co., J. P. Roddy, Secy.; enlarge plant; \$25,000 to \$30,000; addition to tank dept.; increase daily capacity from 65 tons to 95 tons.

Tex., Kingsville.—Kingsville Ice & Milling Co. organized; Robert Driscoll, Prest.; M. Nuckols, Secy.-Gen. Mgr.; erect 15-ton-capacity ice plant; 5000-bu. storage capacity elevator; brick and iron construction. (Previously noted inceptd., capital \$50,000.)

Iron and Steel Plants.

Md., Baltimore.—Rolling Mills.—Eastern Rolling Mills Co., Baltimore St. and Sewer Rd.; rebuild electric generating plant; reported loss \$35,000 to \$50,000.

Land Developments.

Tenn., Chattanooga.—Walden's Ridge Improvement Assn. organized; capital \$100,000; Jno. C. Leggett, Gen. Mgr., Volunteer Bldg.; develop 6000 acres on Walden's Ridge; grow fruits and berries; build canneries at Sales Creek and Graysville.

Tex., Dallas.—Dallas-Western Trucking Co. inceptd.; capital \$12,000; W. C. Bechert, Brant Home, H. J. Switzer.

Lumber Manufacturing.

Ark., Ashdown.—Red River Lumber Co.; has plant; erect planing mills; later erect sawmill.

Ark., Lawrence.—W. H. Moore Lumber Co. (lately noted inceptd., capital \$50,000) organized; W. H. Moore, Prest., 625 Central Ave., Hot Springs, Ark.; has mills at Lawrence and Cove Creek; daily capacity 20,000 to 30,000 ft.; 40,000 equipment; install sawmill, engine, conveyor; lay rails. (See Machinery Wanted—Sawmill; Engine; Conveyor Chain; Rails.)

Fla., Bridgend.—Osceola Cypress Co., W. B. Hoband, V.-P.; erect saw, planing, lath and shingle mill; annual capacity 20,000,000 ft. (Lately noted increase capital \$500,000 to \$750,000.)

Fla., Jacksonville.—Baldwin Lumber Co. inceptd.; capital \$100,000; John D. Baker,

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Prest; Roy D. Fisk, V.-P.; Roland D. Baldwin, Secy.-Treas.

Fla., Limestone.—Limestone Mfg. Co.; rebuild burned saw and planing mill; reported loss \$75,000.

Fla., Limestone.—Limestone Mfg. Co.; rebuild burned \$50,000 mill for lumber and crate material.

La., Alberta.—Alberta Lumber Co., J. P. Franks, Secy.-Treas.; erect 24x30-ft. shed; install mchy.; purchased; \$6000 or \$7000; daily capacity 8000 ft. (Lately noted organized, capital \$10,000.)

Miss., Grenada.—Gayoso Lumber Co., Memphis, Tenn.; purchased 8000 acres timber; construct logging camp to cut timber; build 9-ft. band sawmill; \$750,000 investment for developments, buildings, mchy., timber, etc.

Miss., Jackson.—E. L. Hendricks, Lumber Co. Inceptd.; capital \$150,000; E. L. Hendricks, J. J. Sledge, Geo. C. Claypool; all Bowling Green, Ky.

Miss., Laurel.—C. G. Hull Lumber Co. Inceptd.; capital \$25,000; C. G. and M. E. Hull, W. J. Pack.

N. C., Dover.—Wimsett Timber & Lumber Co. Inceptd.; capital \$75,000; erect sawmill.

Okla., Tulsa.—Southern Mill & Lumber Co., 1645 E. 6th St., organized.

Tex., Camden.—Hardwood.—W. T. Carter & Bro., Houston, Tex.; erect hardwood sawmill.

Tex., Dublin.—Harris-Clay Lumber Corp. chartered; capital \$35,000; J. G. and D. L. Harris, B. M. Utterback.

Tex., El Paso.—Thede-Sherrod Lumber Co. Inceptd.; capital \$80,000; P. C. Thede, Benjamin Sherrod, J. C. White.

Tex., Texarkana.—Cook Lumber Co. Inceptd.; capital \$50,000; J. P. and C. E. Cook, C. M. Blocker.

Virginia.—Otis E. McCoy, Prest., Monkton Roller Mills, Mt. Washington, Md.; incorporate company to establish sawmill; daily Roller Mills, Mt. Washington, Md.; incorporate company to establish sawmill; daily capacity 500,000 ft.; cut Va. and W. Va. pine; estimated to contain 50,000,000 ft. (See Machinery Wanted—Sawmill.)

W. Va., Huntington.—Northeast Lumber Co. Inceptd.; capital \$50,000; Paul W. Scott, M. A. Simms; both Huntington; F. R. Knapp, Conneautville, Pa.

W. Va., Marlinton.—Marlin Lumber Co. organized; M. S. Wilson, Prest.-Mgr., Marlinton; John S. Hamill, V.-P., Mill Creek, W. Va.; George W. Wilson, Secy.-Treas., Elkins, W. Va.; install 8-ft. band mill; daily capacity 35,000 to 40,000 ft.; develop 10,500-acre tract.

Mining.

Ala., Bessemer.—Marble and Granite.—Company organized; capital \$20,000; M. E. Crowell, J. E. Dillard, D. W. Howton.

Ark., Batesville.—Limestone.—Superior Limestone Co., J. B. Harvey; develop 36 acres limestone; install pulverizing mchy. (See Machinery Wanted—Pulverizer.)

Ark., Batesville.—Manganese.—White River Manganese Co., Gary, Ind.; acquired plant; install additional machinery.

Fla., Bartow.—Phosphate.—Seminole Phosphate Co., Croom, Fla.; acquired 600 acres; develop; install mining plant. (Lately noted Inceptd., capital \$300,000.)

Fla., Polk County.—Phosphate.—Southern Phosphate Corp. organized; care Hayden, Stone & Co., 25 Broad St., New York; 87 Milk St., Boston; plans to buy lands estimated to contain 26,500,000 tons phosphate rock and 3 mining plants; proposes increase to annual output 700,000 tons.

Md., Texas.—Limestone.—John C. Bosley, 1816 N. Calvert St., Baltimore; incorporate company to quarry limestone; purchased 340-acre tract.

Miss., Clarksdale.—Sand, etc.—Delta Construction & Sand Co. Inceptd.; capital \$200,000.

Tenn., Knoxville.—Fluorspar.—Tennessee Fluorspar Co. chartered; Jno. H. Kresge, Knoxville; Richard B. Herzer, Nashville, Tenn.; W. I. Hibbs, Pittston, Pa.

Metal-Working Plants.

Mo., Kansas City.—Sheet Metal Specialties.—Whitaker-Glessner Co., Wheeling, W. Va.; erect mfg. plant and warehouse.

Mo., St. Louis.—Tinware.—Schleuter Mfg. Co., W. H. Schleuter, Prest., 4616 N. Broadway; erect 4-story 70x110-ft. factory; C. F. Fay, Archt., Merchants-Laclede Bldg.

S. C., Hartsville.—Cans.—Star Can Co. Incorporated; capital \$200,000; C. W. and D. R. Coker; C. K. Dunlap; mfre. cans and other metal containers.

W. Va., Huntington.—Enameled Ware.—Ohio Valley Enameling Co.; build 42,000-sq. ft. addition; \$50,000; install machinery; \$125,000.

Mining.

Mo., Eminence.—Copper.—J. E. Bennett, Springfield, Mo.; install electrical copper smelter and build dam across Current River; lay railroad; estimated cost \$250,000; contemplated.

Miscellaneous Construction.

Fla., Miami.—Water-front Improvements.—City; improve bay front from 8th to 14th Sts.; vote \$1,500,000 bonds. Address The Mayor.

Miscellaneous Enterprises.

Ala., Andalusia.—Laundry.—Andalusia Steam Laundry Inceptd.; capital \$10,000; J. L. Knox.

Ga., Port Wentworth.—Creosoting.—Savannah Creosoting Co. organized; S. W. Labrot, Prest., care National Park Bank, New York; F. S. Bishop, Gen. Mgr., Hotel Savannah, Savannah, Ga.; storage yard, tanks, tracks, buildings, etc., for wood-preserving plant; install 600,000 mchy.; annual capacity 100,000,000 ft. board measure. (Supersedes recent item.)

Ala., Gadsden.—Slag Crusher.—Birmingham Slag Co., Henry Badham, Prest., Birmingham, Ala.; establish slag-crushing plant.

Ark., Lockesburg.—Potato Curing.—T. W. Park; enlarge sweet potato curing plant; increase capacity from 10,000 to 50,000 bu.

Fla., Tampa.—Publishing.—Tampa Morning Tribune Co.; erect 7-story, 65x105-ft. reinforced concrete building; tile curtain walls; inside partitions gypsum block tile; composition and tile flooring; \$200,000; install \$10,000 elevators; B. C. Boufoey, Archt., Petteway Bldg.; C. F. Aulick, Contr.

Ky., Ashland.—Laundry.—C. W. Dick; erect 2-story-and-basement 25x129-ft. building; mill construction; J. W. King, Archt., Gaylord Bldg.; Cox Construction Co., Contr. (Lately noted to erect.)

Ky., Louisville.—Concrete Work.—Concrete Repair Co. Inceptd.; \$2500 capital; Samuel L. Robertson.

La., Monroe.—Plumbing, etc.—J. G. Bell Co. Inceptd.; capital \$5000.

Md., Hagerstown.—Dairy.—Hagerstown Dairy Co. organized; \$20,000 capital; Raymond W. Parks, Prest.

Mo., Kansas City.—Plumbing.—Ross Mfg. Co., L. C. McConaghy, V.-P.; erect 3-story, 62x25-ft. addition; brick; stone trimmings; composition roofing; J. G. Thurtell, Archt., 3304 Flora Ave.

Mo., Springfield.—Dehydrating Plant.—Greene County Farmers' Assn., W. W. Wadsworth, Prest.; establish \$50,000 hydrating plant.

Mo., Springfield.—Engineering, etc.—Harris Engineering & Construction Co. Inceptd.; capital \$12,000; Alfred G., F. W. and Fred D. Harris.

Mo., Springfield.—Construction.—Miller Construction Co. Inceptd.; capital \$10,000; A. H. Miller, W. W. Whittaker, W. K. Price.

N. C., Charlotte.—Construction.—J. A. Jones Construction Co. Inceptd.; capital \$100,000; J. A. Edwin, Raymond A. Jones.

N. C., Charlotte.—Publishing.—Clark Publishing Co.; erect 4-story-and-basement 40x100-ft. building; reinforced concrete; J. E. Sirrine, Archt., Greenville, S. C.

N. C., Linville.—Construction.—Linville Construction Co. Inceptd.; capital \$10,000; Nelson MacRae, Julian W. and A. M. Horton.

Okla., Okmulgee.—Laundry.—Ott & Ozmun; erect 1-story, 40x80-ft. building; have plans; Haas & Fincher, Contrs.

S. C., Charleston.—Towboat Line.—Charleston Towboat Co. Inceptd.; capital \$75,000; Edward P. Bayles, Michael P. Conlon, Jr., G. W. Sellers.

S. C., Newberry.—Electrical Supplies.—Newberry Electric Co. Inceptd.; capital \$5000; John C. Goggans, Jr., W. S. Cameron.

Tenn., Knoxville.—Laundry.—Model Laundry, F. M. Houser; remodel laundry; install \$10,000 machinery; purchased; later will erect plant; increased capital from \$20,000 to \$50,000.

Tenn., Nashville.—Publishing.—Banner Publishing Co.; rebuild burned plant; reported loss \$150,000.

Tex., Atlanta.—Potato Curing.—Atlanta Potato Curing Co. Inceptd.; capital \$17,000; H. A. O'Neal, R. S. Allday, R. P. Franklin.

Tex., Mineral Wells.—Mineral Water.—Crazy Well Water Co.; erect 2-story and basement bottling plant; Industrial Building & Engineering Co., Archt.-Engr., 38 S. Dearborn St., Chicago, Ill.

Tex., Seguin.—Publishing.—Guadalupe Gazette Publishing Co. Inceptd.; capital \$11,500; Rene Eockenreht, H. M. Wurzbach, H. A. Heldeke.

Tex., Waco.—Printing.—Sedberry-Grove Printing Co. Inceptd.; capital \$4000; T. D. Sedberry, O. T. Grove, A. T. Godshaw.

Tex., West.—Publishing.—Czechoslovak Publishing Co. Inceptd.; capital \$10,000; P. S. Skrabanek, A. J. Morris, F. T. Riha.

Va., Cherrydale.—Cleaning and Dyeing.—Union Dry Cleaning & Dyeing Co. Inceptd.; capital \$50,000; Thomas H. Jones, Prest., Cherrydale; Charles Frazier, Secy., Washington, D. C.

Va., Norfolk.—Laundry.—R. H. Ford, Granby and Evelyn Sts.; erect \$20,000 addition to building; reinforced concrete and brick construction; Nicholas & Lindeman, Contrs.

Va., Roanoke.—Plumbing.—Braxton D. Gibson; erect 30x200-ft. building; for plumbing and tinning plant; H. M. Miller, Archt.

W. Va., Beckley.—Electrical.—Best Electric Co. Inceptd.; capital \$20,000; E. A. Hall, A. A. Peggs, B. B. Hawley.

W. Va., Wheeling.—Publishing.—Progressive Publishers, 1432 Market St., organized; Albert N. Dennis, Gen. Mgr. (Lately noted Inceptd., capital \$50,000.)

Miscellaneous Factories.

Ark., Fort Smith.—Glass.—Harding Glass Co.; construct plant addition; double capacity; increase output from 800 to 2000 boxes window glass a season.

Ark., Little Rock.—Mattresses.—Robinson-

Rodgers Co., Joppa Branch; erect 1-story 150x350-ft. fireproof construction factory; sprinkler system; 150x150-ft. fireproof construction warehouse; excelsior plant; total cost \$200,000; John P. Almand, Archt., 1107 Boyle Bldg.

Ark., Little Rock—Soap.—Universal Soap Co. chartered; capital \$5000; G. G. Archer, Pres.; A. F. Williams, Secy.

Ark., Walnut Ridge—Candy, etc.—Moore Ice Cream & Candy Co.; enlarge plant.

Fla., St. Petersburg—Cardboard, etc.—O. I. C. Mfg. Co. (lately noted inceptd., capital \$25,000) organized; S. T. McClaren, Pres.-Mgr.; has building; install presses, cutters, dies, etc. (See Machinery Wanted—Presses, etc.)

Fla., Tampa—Cigars.—Diaz, Raphael & Co. inceptd.; capital \$50,000; N. Raphael, Pres.; Manuel Suarez, Secy.; Baldomero Diaz, Gen. Mgr.

Ga., Albany—Overalls.—B. W. Simon, Secy. Farmers' Trust Co.; establish overalls factory; has building. (See Machinery Wanted—Overalls Equipment.)

Ga., Albany—Peanuts.—John H. Maclin Peanut Co.; build plant.

Ga., Albany—Peanuts.—Bain Peanut Co.; establish \$150,000 peanut plant; erect 6-story building.

Ga., Albany—Peanuts.—J. B. Worth Co., Petersburg, Va.; build peanut shelling and cleaning plant; J. P. Wright, Contr.

Ga., Atlanta—Lubricating Oil.—State Lubricating Oil Co. of Georgia inceptd.; capital \$30,000; H. H. Woodruff, Robt. Morang, Jr., R. B. Carmody.

Ga., Atlanta—Medicine.—Cherokee Medicine Co. reorganized; capital \$100,000; Geo. W. Woodruff, Pres.; remodel and enlarge plant; install mchys.

Ga., Atlanta—Rubber Products.—Diamond Holfast Rubber Co., Wm. M. Riddick, Sales Mgr.; contemplates erecting factory addition for tire patches, fan belts, etc.

Ky., Lexington—Ice-cream.—Sanitary Milk Products Co., Edw. Williamson, Pres.; erect 120x55-ft. stucco and concrete floor building; 20,000 sq. ft.; open bids in 30 days; install mchys. for daily capacity 20,000 gals. ice-cream. (Supersedes recent item.)

La., Lafayette—Candy.—Hy. J. Boudreaux, Box 4; establish pecan-candy factory.

Ky., Louisville—Bakery.—Grocers' Baking Co.; increased capital from \$100,000 to \$300,000.

La., Shreveport—Ice-cream.—Campbell Ice-Cream Co., W. W. Campbell, Pres.; expend \$10,000 to increase plant; enlarge hardening room; install mchys. for daily capacity 1200 gals.; purchased equipment.

Ky., Owensboro—Bakery.—W. A. Ling; purchased building; establish bakery; mchys. purchased; daily capacity 1900 loaves.

Md., Baltimore—Chemicals.—Mutual Chemical Co. of America, John M. McCracken, Mgr.; Block and Wills Sts.; erect 2-story 100x200-ft. addition; Morrow Bros., Contrs., 1201 Fidelity Bldg.

Md., Baltimore—Cork Products.—Crown Cork & Seal Co., Chas. M. Hood, Jr., Pres., 1511 Guilford Ave.; contemplates 4-story addition to plant; brick; concrete; fireproof; Otto G. Simmons, Archt., Maryland Casualty Bldg. (Lately noted contemplating plant.)

Md., Baltimore—Paints.—Wun-Tex Co. chartered; capital \$10,000; Chas. W. Wunner, 1703 Homestead St.

Md., Baltimore.—M. F. & F. C. Bayne, De Soto Apts.; erect 2-story 51x72-ft. building; L. Schoenlein & Son, Contrs., 2217 E. Baltimore St.

Miss., Yazoo—Dairy Products.—Yazoo Agricultural & Dairy Products Co. inceptd.; capital

\$25,000; C. F. Buman, George Jones, Edward Gerrits; all Canton, Miss.

Mo., Kansas City—Cigarettes.—American Tobacco Co., W. H. O'Brien, V.-P., 111 Fifth Ave., New York; alter 100x300-ft. factory; reinforced concrete; manufacture cigarettes; daily output 2,500,000; Francisco & Jacobus, Engrs., 511 Fifth Ave., New York. (Lately noted.)

Mo., Kansas City—E. C. Gatlin Co., 915 Broadway; leased 3-story and basement building; additional floor space 22,000 sq. ft.; mfre. cake flour.

Mo., Springfield—Shoes.—Robt. Roblee, care Chamber of Commerce; shoe factory; contemplated.

Mo., St. Louis—Ice Cream.—Standard Ice Cream Co.; erect plant additions.

Mo., St. Louis—Wine.—Garrett & Co., Brooklyn, N. Y.; build \$700,000 plant; reinforced concrete; has let contract; mfre. non-alcoholic wine.

N. C., Chadbourne—Coca-Cola.—Chadbourne Coca-Cola Bottling Co. inceptd.; capital \$100,000; George H., T. C. and George H. Hutaff, Jr.; all Wilmington, N. C.

N. C., Rocky Mount—Bakery.—Carney Baking Co. inceptd.; capital \$25,000; A. B. Carney, R. S. Wilson, H. L. Henson.

N. C., Winston-Salem—Tobacco.—Imperial Tobacco Co.; build redrying plant.

Okla., Enid—Drugs.—Sanford Stone Drug Co. inceptd.; capital \$15,000; J. A. Stone, R. L. and Ethel B. Sanford.

Okla., Muskogee—Creamery.—Muskogee Creamery Co. chartered; \$25,000 capital; R. W. Brice, R. A. Evans, John W. Brown.

Okla., Oklahoma City—Batteries.—Terminal Battery Co. inceptd.; capital \$7500; W. R. and T. R. Quarles, L. M. Whetstone.

Okla., Sulphur—Ice Cream.—Frier Bros. Ice Cream Co.; erect factory.

Okla., Yukon—Oils.—Circle Oil & Grease Co. inceptd.; capital \$15,000; Jas. K. Davis.

S. C., Bennettsville—Cigars.—D. W. Stewart Cigar Co. organized; D. W. Stewart, Pres. and Gen. Mgr.; establish plant; mfre. cigars; daily output 10,000; 16 suction tables, 6 bunch machines, 2 humidifiers, vacuum unit; purchased. Lately noted inceptd., capital \$5000. (See Machinery Wanted—Motors.)

S. C., Darlington—Coca-Cola.—Darlington Coca-Cola Bottling Co.; increased capital from \$20,000 to \$50,000.

S. C., Darlington—Young-Tucker Mfg. Co. inceptd.; capital \$40,000; H. T. Young, R. H. Tucker, Geo. H. Edwards.

S. C., Hartsville—Chemicals.—National Chemical Co. inceptd.; capital \$75,000; C. W. and D. R. Coker, C. K. Dunlap.

S. C., Orangeburg—Velvo—Velvo Products Co. inceptd.; capital \$50,000; P. M. Smoak, Pres.; J. F. Hunter, Mgr.; mfre. valve for cleaning and polishing furniture and automobiles. (See Machinery Wanted—Bottling Machinery; Labelling Machinery, etc.; Boxes.)

S. C., St. George—Coca-Cola.—St. George Coca-Cola Bottling Co.; increased capital from \$12,000 to \$50,000.

S. C., Sumter—Stemmery.—Sumter Stemmery Co. organized; capital \$60,000; E. I. Reardon, Secy.; John W. McKiever, Constr. Engr.; erect 2-story 178x76-ft. brick-construction building; 1-story 28x128-ft. annex; 1-story 25x25-ft. brick-construction boiler-room; bids opened about Feb. 1; architect drawing plans; leases and operates stemmery; install electric freight elevator, power press, 120 H. P. steam boiler, 2 sets scales, steam drying mchys., ordering machine, etc. (See Machinery Wanted—Elevators; Press; Boiler; Scales.)

Tenn., Columbia—Chera-Cola.—F. G. Dobson, Atlanta, Ga.; A. M. Beck, Macon, Ga.;

purchased plant; plans enlarging building and plant; \$5000; install mchys.; double capacity.

Tenn., Centerville—Bottling.—Duck River Milling Co., H. S. O'Connor, Mgr.; install bottling plant. See Flour, Feed and Meal Mills. (See Machinery Wanted—Bottling Machinery.)

Tenn., Knoxville—Creamery.—Tennessee Valley Creamery Co. organized; has building; install machinery; mfre. ice cream, butter, cheese, etc.

Tenn., Memphis—Chemicals.—Chemical Products Co. inceptd.; capital \$50,000; R. L. Crowe, Pres.; Clarence Henochsberg, Secy.-Treas.; remodel building; mfre. physicians' and dentists' specialties.

Tenn., Memphis—Mill Supplies.—Reed & Duecker; rebuild burned plant; loss \$100,000.

Tex., Dallas—Shoe Polish.—A. E. Perkins Corp.; increased capital from \$20,000 to \$35,000.

Tex., Dallas—Dolls.—Dallas Doll Mfg. Co. inceptd.; capital \$12,000; C. C. Swanson, Ben Anthony, W. L. Wright.

Tex., Dallas—Bakery.—Campbell-Stone Bread Co., 30th and Troost Sts., Kansas City, Mo.; remodel bakery; erect 2-story 69x119-ft. building; brick and reinforced concrete construction; Fogle Construction Co., Contr., 619 Reliance Bldg., Kansas City.

Tex., Dallas—Yeast.—Fleischmann Co., New York and Chicago; build \$500,000 plant; double within next several years; 3-story building for first unit.

Tex., El Paso—Headlights.—El Paso Headlight Mfg. Co. inceptd.; capital \$3000; R. E. and R. C. Ross; W. J. Chesak.

Tex., Houston—Paint and Varnish.—Gildeden Co., Adrian D. Joyce, Pres., Cleveland, O.; purchased 150x200-ft. site; erect \$100,000 plant to mfre. paint and varnish.

Tex., Lufkin—Medicine.—O. S. Hog Remedy Co., R. A. Kennedy, Pres.; plans 2-story building; brick; mfre. hog remedies; \$100,000 plant.

Va., Front Royal—Cider, etc.—Orchard Products Co. inceptd.; capital \$25,000; J. B. Harnsberger, Pres.; B. J. Hillidge, Secy.

Va., Norfolk—Martini Mfg. Co.; increased capital from \$15,000 to \$50,000.

Va., Staunton—Clothing.—Co-Sa Mfg. Co. inceptd.; capital \$25,000; B. J. Sachs, Pres.; Maurice Cohen, Secy.

Va., Richmond—Tobacco.—Larus Bros.; erect 5-story 100x174-ft. tobacco factory with steam plant; reinforced concrete; J. E. Sirrine, Archt.-Engrs., Greenville, S. C.

Va., Roanoke—Potash.—United States Potash & Brick Corp., O. T. Denuhardt, Gen. Mgr.; issue \$600,000 bonds for balance on mineral land, manufacturing plant, etc.; actual and estimated holdings when completed will include \$473,208 factory and equipment, \$100,000 lime works, \$71,600 feldspar and farming land of 716 acres, \$75,000 factory site, \$55,000 crushers, pulverizers and quarry equipment, \$50,000 power equipment; build additional \$100,000 lime plant; invested \$500,000 for research, small commercial plant, etc.; proposes annual capacity 6000 to 7000 tons potash from feldspar and 100,000,000 bricks from residue of potash mfre.; Trust Company of Alabama, Trustee, Kenyon Bldg., Louisville, Ky.

Va., South Boston—Tobacco.—W. A. Willingham Tobacco Co.; erect 3-story 89x180-ft. and 1-story 47x236-ft. reinforced concrete flat slab construction building; \$125,000; mchys. purchased; Heard & Chesterman, Archts., Danville, Va.; J. A. Jones Construction Co., Contr., 800 Realty Bldg., Charlotte, N. C. (Lately noted.)

W. Va., Fairmont—Window Glass.—Fairmont

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Window Glass Co. inceptd.; capital \$150,000; C. L. Shaver, Duncan Sinclair, Smith Hood.

W. Va., Salem—Window Glass.—Paramount Window Glass Co. inceptd.; \$100,000 capital; Hubert Labriotte, Sr., Fernard Decoeur, Sr., F. J. Heniss.

Motor Cars, Garages, Tires, Etc.

Ala., Anniston—Repair Shop.—E & B Automobile & Supply Co. inceptd.; capital \$50,000; John F. Boozier, J. H. Edmondson, D. E. Monahan; erect addition to building; brick.

Ala., Birmingham—Automobile Manufacturing.—Preston Motors Corp., R. A. Skinner, Pres.-Mgr., 321-322 First National Bank Bldg.; erect 700x350-ft. building of steel, concrete, reinforced glass in saw-tooth roof construction and sides; annual capacity 2500 to 3500 cars; erect 2-story building 150 ft. square for offices and 2 single-story buildings for washroom and electric turbine engines; J. F. Dietz, Const. Engr.; R. A. Skinner, Archt. (Lately noted organized, etc.)

Ala., Birmingham—Filling Station.—Gulf Refining Co. of Louisiana; erect filling station; brick and concrete; \$5000; has let contract.

Ala., Gadsden—Automobiles.—Allison Automobile Co.; erect addition to building; total frontage 75x150 ft., including repair department.

Ark., Little Rock—Automobiles.—Universal Motor Co.; lease 2-story 50x140-ft. building to be erected by Andrew H. Scott estate; tile floor in showroom; electric elevator.

D. C., Washington—Automobiles.—Automobile Mart inceptd.; capital \$100,000; Walter M. Bastian, John C. Brooks, Wm. E. Richardson.

Fla., Miami—Bicycles.—Murphy Cycle Co. inceptd.; capital \$25,000; J. R. Murphy, Pres.; Nell S. Murphy, V.-P.; E. R. Murphy, Secy.-Treas.

Fla., Plant City—Garage.—Mays Garage Co. inceptd.; capital \$15,000; W. E. Lee, Pres.; E. W. Mays, Mgr.; R. M. McKinney, Secy.-Treas.

Fla., St. Petersburg—Garage.—Cleve Lenave; erect 2-story garage; \$2500.

Fla., St. Petersburg—Garage.—C. L. Kiplinger; erect 2-story garage; \$2000.

Ga., Atlanta—Automobiles.—Von Caon-Wall Motor Co.; erect 4-story building; brick.

Ky., Glasgow—Automobiles.—Glasgow Buick Co. inceptd.; capital \$20,000; R. H. Martin, W. R. Dickinson, Brents Dickinson.

Ky., Harrodsburg—Garage.—Ingram Buick Co., J. T. Ingram; rebuild 120x140-ft. garage; brick; concrete; steel; \$30,000 to \$40,000; Walker Parson, Contr. (Lately noted.)

Mo., Kansas City—Filling Station.—Southern Oil Corp. care of E. R. Monfort, Security Bldg.; erect 1-story, 35x40-ft. filling station; frame; stucco; composition roof; construction by owner; Greenbaum, Hardy & Shumacker, Archts., 216 Scarritt Bldg. (Supercedes recent item.)

Mo., Kansas City—Garage.—Wm. F. Beck, 2604 Victor St.; erect 49½x122-ft. building; brick; trussed steel roof; cement floor; \$10,000; heating plant \$2500; construction by owner; C. M. Williams, Archt., 404 Grand Ave. Temple.

N. C., Badin—Automobiles.—Badin Motor Co. inceptd.; \$10,000; A. V. Wade, W. T. Surratt, H. O. Turner.

Mo., St. Joseph—Garage.—North St. Joseph Real Estate, Loan & Investment Co.; erect addition to building.

N. C., Fayetteville—Automobiles.—J. & N. Motor Co. inceptd.; capital \$10,000; J. W. Jernigan, Gordan Nance, C. N. Talbot.

N. C., Greensboro—Automobile Manufacturing.—Southern Truck & Car Corp., J. A. Nor-

ford, Pres. and Gen. Mgr.; increase capital from \$500,000 to \$1,000,000; has 2-unit plant; build additional units; mfr. passenger and truck motor cars.

N. C., Shelby—Garage.—Rush Motor Co. organized; Rush Stroup, R. V. Toms, W. T. Calton; erect 2-story building; garage and workshop on first floor; storage and showrooms on second.

N. C., Winston-Salem—Automobile Shop.—Carolina Cadillac Co.; erect automobile shop.

Okla., Blanchard—Automobiles.—Blanchard Motor Co. inceptd.; capital \$15,000; H. B. Featherstone, W. J. Jones, L. F. Skaggs.

Okla., Okmulgee—Tractors.—Fordson Tractor Co.; erect 2-story and basement, 77x100-ft. building; brick; stone trimmings; composition roofing; Smith, Rea, Lovitt & Senter, Archts., Parkinson Bldg.

Okla., Shawnee—Automobiles.—Shawnee Motor Supply Co. inceptd.; capital \$25,000; S. S. Johnson, W. M. Beck, C. M. Neal.

S. C., Gaffney—Automobiles.—La Bree Motor Co. inceptd.; capital \$15,000; J. C. Creech, Pres.; H. G. La Bree, Secy.-Treas.

S. C., Greenville—Garage.—Marshall B. Prevost; build 1-story, 75x40-ft. garage; \$11,000; erect 40x20-ft. filling station; \$2500; Fitzpatrick-Terry Co., Contrs.

S. C., Orangeburg—Filling Station.—Velo Products Co. inceptd.; capital \$50,000; P. M. Smoak, Pres.; J. F. Hunter, Mgr.; erect filling station, storeroom for automobile accessories, automobile laundry and storage room for cars; purchased equipment for filling station.

S. C., Saluda—Automobiles.—Saluda Motor Co. inceptd.; capital \$15,000; J. H. Thrailkill, Saluda; D. N. Smith, Columbia, S. C.

Tenn., Knoxville—Garage.—Cary F. Spence; erect garage on 75x200-ft. site.

Tenn., Knoxville—Storage Garage.—Victor H. McLean; erect 3-story garage on 135x100-ft. site; fireproof; 3 entrances; separate compartments for cars; repair shop; filling station.

Tex., Corpus Christi—Garage.—Glover Johns; erect 1-story 100x150-ft. garage; brick or hollow tile.

Tex., Eastland—Automobiles.—Automobile Sales Co. inceptd.; capital \$10,000; J. M. Sears, Maple Wilson, O. S. Brashear.

Tex., Fort Worth—Garage.—Slay, Simon & Smith, U. M. Simon, 605 Wheat Bldg.; erect 2-story 50x95-ft. building; \$33,000; Butcher & Sweeney, Contrs.; Charles Allen, Archt.; Butcher, Sweeney & Friedman, Engrs. (Lately noted.)

Tex., Galveston.—John Christensen & Co.; erect 2-story 42x120-ft. building; reinforced concrete; \$24,000; J. W. Zempter, Contr. (Lately noted.)

Tex., Houston—Garage.—Edson & Ferey organized; capital \$100,000; E. G. Edson, I. J. Ferey, C. L. Berly.

W. Va., Kingwood—Garage.—Loar Garage Co. inceptd.; capital \$25,000; J. C. Gibson, Lula W. Gibson, Harry R. Loar.

Tex., Sweetwater—Tractor Manufacturing.—Armstrong Farm Tractor Co., Ira Armstrong; erect first building, 100x200 ft.; reinforced concrete, steel and glass; \$30,000; daily capacity first year, 15 tractors; cost of equipment \$100,000; has let contract for motors; bids for additional machinery until Mar. 1. Lately noted. (See Machinery Wanted—Tractor Plant Machinery.)

Tex., Waco—Tires.—Central Tire & Rubber Co. inceptd.; capital \$12,000; J. J. Crouch, H. L. Freear, H. M. Pavey.

Va., Richmond—Automobiles.—Auto-Memo Sales Corp. chartered; capital \$100,000; F. C.

Schloss, Pres.; A. W. Calisch, Secy.; R. Lambert.

Va., Roanoke—Garage.—Boswell Realty Co.; erect 75x200-ft. garage.

W. Va., Union—Garage.—A. W. Boen, Linde, W. Va.; erect 2-story and basement 66x82-ft. building; frame construction; construction by owner; Alex Mahoid, Archt., 601 L. & C. Bldg., Bluefield, W. Va.

Railway Shops, Terminals, Roundhouses, Etc.

Tex., Marshall.—Marshall & East Texas R. R.; rebuild burned machine shops; reported loss \$35,000.

Road and Street Construction.

Ala., Anniston.—Calhoun County Commrs.; resurface Coldwater highway between Oxford and Coldwater; Nixon Transfer Co., Contr.

Ala., Anniston.—State Highway Dept., Bell Bldg., Montgomery, Ala.; construct 4 mi. State Trunk Rd. No. 29 between Camp McClellan and Jacksonville; 8417 cu. yds. waterbound macadam; 37,688 sq. yds. bituminous surface; 16,723 lbs. reinforcing steel; bids until Feb. 24; W. C. Keller, State Highway Engr., Montgomery, Ala. (See Machinery Wanted—Road Construction.)

Ala., Gadsden.—City, W. P. Johnson, Mayor; plans paving streets and sidewalks.

Ark., Blissville.—Jerome Hardwood Lumber Co., H. F. Moeller; construct 1 mi. asphalt streets; 30 mi. hard-surfaced road to connect with Arkansas-Louisiana highway.

Ark., Ozark.—Commrs. Ozark Sidewalk Dist. No. 1, D. B. Anderson; construct 38,100 sq. ft. sidewalk; 3228 sq. ft. crosswalk; \$15,000 available; Little Rock Granite Co., Contr., Little Rock; Carter & Knoch, Engrs., 837-7 A. O. U. W. Bldg., Little Rock, 2. (Lately noted inviting bids.)

Ark., Texarkana.—City; pave streets; brick and asphalt with concrete base; \$800,000. Address The Mayor.

Fla., Bunnell.—Flagler County Commrs. Geo. Moody, Chrmn.; construct 40 mi. roads in Haw Creek Special Road & Bridge Dist.; 6,000 cu. yds. coquina rock; 700 ft. bridges; bids until Feb. 9; S. C. Stallings, County Engr. (See Machinery Wanted—Road Construction.)

Fla., Fort Pierce.—St. Lucie County Commissioners; construct roads; voted \$550,000 bonds; Federal aid \$240,000. (Lately noted to vote.)

Fla., Jacksonville.—City Comsn.; pave Bay Enterprise and other streets and avenues; vitrified brick on concrete base; vitrified brick on cement and sand with granite curb; \$30,619.73; J. Y. Wilson, Contr.

Fla., Sumterville.—Sumter County Commrs.; construct 40 mi. hard-surfaced roads; voted \$750,000 bonds. (Lately noted to vote.)

Fla., Zolfo Spring.—Town, I. D. Robinson, Clk.; plans improvements to Victory Highway, including paving, curbing and sewer. \$36,900; Adams, Evans & Co., Contrs., Jacksonville, Fla. (Lately noted inviting bids.)

Ga., Albany.—City; pave 16 additional blocks streets; concrete; vitrified brick and asphalt; vitrified brick and willite paving. Address The Mayor.

Ga., Albany.—City, H. A. Peacock, Mayor; pave 16 blocks streets; concrete; asphaltic concrete; sheet asphalt; vitrified brick and willite paving; \$162,000 available; bids until Feb. 5; R. J. Edgerly, Engr. Lately noted. (See Machinery Wanted—Paving.)

Ga., Blue Ridge.—Fannin County, G. A. Curtis, Ordinary; grade, drain and topsoil pub-

lic roads: \$140,000 available; H. F. Whitner, Contr. (Lately noted voting bonds.)

Ga., Savannah.—Chatham County Comms.; construct retaining wall along Ogeechee Rd.; bids until Feb. 12. (See Machinery Wanted—Paving Plant.)

Ga., Valdosta.—Lowndes County Comms. Roads and Revenues, L. M. Stanfill, Chrmn.; construct 4.89 mi. hard-surfaced road between Valdosta and Mineola, on National Highway; 6,940 sq. yds. pavement, penetration asphalt macadam, asphalt macadam Finley method, Kentucky rock asphalt, asphaltic concrete, cement concrete, bituminous pavement, Willite method; 9397 cu. yds. excavation; bids until Feb. 24; Klyce & Kackley, Project Engineers, 4th and 1st Natl. Bank Bldg., Nashville, Tenn. (See Machinery Wanted—Paving.)

Ga., Waycross.—City; pave 18,000 sq. yds. streets; brick; \$100,000; Pittman Constr. Co., Contr., Atlanta, Ga.

Ky., Whitesburg.—Letcher County Comms.; construct roads; vote on bonds.

La., Monroe.—Union County Road Comsn.; construct Jackson Highway from Monroe to connect with Charlotte-Savannah Highway; \$500,000; Porter & Boyd, Contrs., Charlotte, N. C.

Md., Cumberland.—City, Mayor Koon; plans improvements to streets, sewers, etc.; contemplates voting on \$1,000,000 bonds.

Miss., Belzoni.—Town; pave streets; improve light and power plants; vote Jan. 29 on \$275,000 bonds. Address The Mayor.

Miss., Indianola.—Sunflower County Highway Comms. Dist. No. 1, John W. Johnson, Chk.; gravel 20 mi. highways; bids until Feb. 2; John M. Harbert Engineering Co., Engr. (See Machinery Wanted—Road Construction.)

Mo., Clayton.—St. Louis County Comms.; construct 29.18 mi. road; 1 and 2-course concrete; brick and bitulithic; \$1,872,432.58 available; Wm. Elbrigg, Engr. (Lately noted approving plans for highways.)

Mo., Jefferson City.—City; pave and improve 234,000 sq. yds. streets; bituminous; brick; Linn F. Brown, City Engr.

Mo., Kennett.—Dunklin County Comms.; construct roads; voted \$1,200,000 bonds.

N. C., Greenville.—Pitt County Highway Comsn.; construct 12 mi. hard-surface highway from Greenville to Farmville; 16 ft. wide; 130,897 sq. yds. monolithic brick pavement; 130,897 sq. yds. concrete base; 130,897 sq. yds. one-course cement concrete pavement; T. H. Gill & Co., Contrs., Binghamton, N. Y.; J. B. Harding, Highway Engr., Greenville. (Lately noted inviting bids.)

N. C., Nashville.—Nash County Comms.; construct 10 mi. highway between Rocky Mount and Nashville; has let contract.

N. C., Whiteville.—Columbus County Road Comms.; construct 1¼-mi. road; 16 ft. concrete; \$50,000 available; C. R. Humphries, Engr., Wilmington, N. C. (Lately noted.)

N. C., Wilmington.—City; plans street improvements; \$25,000; Carolina Engineering Co., Engr., 412 Southern Bldg.

Okla., McAlester.—City, E. M. Fry, City Mgr.; construct 2 to 5 blocks pairing on Cherokee Ave.; brick; bids about Feb. 15; plans paving 1 mi. to north city limits; G. M. Brown, Engr. (See Machinery Wanted—Paving.)

Okla., McAlester.—City, E. M. Fry, City Mgr.; construct 2 or 5 blocks paving on Grand Ave.; brick; \$46,000 available; John W. Rooks, Contr.; G. M. Brown, Engr. (Supercedes recent item.)

S. C., Dillon.—City; pave streets; concrete; \$25,000; General Road & Drainage Constr. Co., Contr., Columbia, S. C.

S. C., Laurens.—Laurens County Highway Comsn.; construct 14.131 mi. top-soil road on Piedmont highway between Laurens and Fountain Inn; 40,539 cu. yds. top-soil; 1976 lbs. steel reinforcement; 55,621 cu. yds. excavation; bids until Feb. 6; J. Roy Pennell, State Highway Engr., Columbia, S. C. (See Machinery Wanted—Road Construction.)

Tex., Angleton.—Brazoria County Comms., Freeport Road Dist.; construct 3.3 mi. Freeport road to Bryanmound; 1600 lin. ft. interval bridging, creosoted pile substructure; \$70,000.

Tex., Angleton.—Brazoria County Comms., Road Dist. No. 23, L. Mims, Chrmn., Freeport, Tex.; construct 10 mi. Quintana road to Jones Creek, including creosote pile bridge across Freeport drainage canal and steel bridge with creosote pile substructure across Jones Creek; \$156,000; Perrys Landing Road Dist., S. I. Stratton, Chrmn., Freeport, Tex., will continue road 6 mi. from Jones Creek to Clemmens State Farm.

Tex., Corsicana.—Navarro County, H. E. Traylor, County Judge; improve Corsicana-Rice road; 158,762.6 cu. yds. gravel; 3516.49 cu. yds. concrete; 7680 cu. yds. rip-rap; 404,285 lbs. reinforcing steel; 13,312 lin. ft. concrete piling; bids until Feb. 2. (See Machinery Wanted—Road Construction.)

Tex., Port Lavaca.—Calhoun County Commissioners; surface gravel roads; vote Feb. 14 on \$100,000 bonds.

Tex., Freeport.—City; construct 110,000 sq. ft. cement sidewalks 5 to 8 ft. wide; probably let contract to G. L. Clark, Contr., Huntsville, Tex.

Tex., Groesbeck.—Limestone County, J. E. Bradley, County Judge; construct 11,917 mi. State Highway No. 14; 28,329 mi. State Highway No. 7; 250,500 cu. yds. gravel; 240,000 cu. yds. rock; 200,000 cu. yds. borrow; 39,200 cu. yds. excavation; 279,000 lbs. reinforcing steel; 88,000 lbs. structural steel; bids until Jan. 29; Fred P. Holt, Engr., Mexia, Tex. (See Machinery Wanted—Road Construction.)

Tex., Hillsboro.—Hill County Comms., R. T. Burns, County Judge; construct 11.75 mi. highway on Hillsboro-Waco road, State Highway No. 6; gravel; 27,875 cu. yds. gravel surfacing; 89,827 cu. yds. earth excavation; 78,000 lbs. reinforcing steel; bids until Jan. 31; Bryant & Huffman, Civil Engrs., Hillsboro, and 211-17 Littlefield Bldg., Austin, Tex. (See Machinery Wanted—Road Construction.)

Tex., Hillsboro.—Hill County Comms., R. T. Burns, County Judge; construct 7 mi. Hillsboro-Cleburne road in Dist. No. 1; 13,037 cu. yds. gravel surfacing; 496 cu. yds. concrete; 50,400 cu. yds. borrow; 13,037 cu. yds. earth excavation; 10 mi. Hillsboro-Mexia road in Dist. No. 3; 18,200 cu. yds. gravel surfacing; 84,000 cu. yds. borrow; 18,000 cu. yds. excavation; bids until Jan. 31; Bryant & Huffman, Civil Engrs., Hillsboro, and 211-17 Littlefield Bldg., Austin, Tex. (See Machinery Wanted—Road Construction.)

Tex., Junction.—Kimble County, C. S. Stevenson, Judge; construct 35 mi. road; gravel; \$250,000 available; bids about Feb. 9; W. E. Simpson, Engr. (See Machinery Wanted—Road Construction.)

Tex., San Angelo.—Tom Green County, Chas. T. Paul, Judge; construct 14 mi. water-bound macadam asphalt surface road on Highway No. 4; 12½ mi. graded road topped with gravel; \$320,000 available; \$400,000 available for other highways; Charles B. Metcalfe & Son, Contrs.; J. E. Beavers, Engr. Supercedes recent item. (See Machinery Wanted—Road Roller; Sprinkling Carts; Wagons.)

Tex., Snyder.—Scurry County, Y. S. Adamson, County Judge; grade and gravel 21 mi. road from Snyder to Scurry-Mitchell-Noland

County line; Federal-aid Project 111; \$100,000 available; bids until Feb. 11; changed date from Jan. 12; Henry Exall Elrod Engineering Co., Engr., Dallas, Tex. (See Machinery Wanted—Road Construction.)

Tex., Weatherford.—Parker County Comms., E. A. Swafford, County Judge; construct 15.1 mi. State Highway No. 1; 141,083.3 cu. yds. gravel; 115,704.9 cu. yds. excavation; 99,825 lbs. reinforcing steel; bids opened Jan. 28; O. Leonard, County Engr. (See Machinery Wanted—Road Construction.)

W. Va., Parkersburg.—City, J. Loyal Gilbert, Mayor; pave streets; concrete; brick on concrete base; asphalt on concrete base; \$200,000; bids in Feb. (See Machinery Wanted, Paving.)

Sewer Construction.

Ark., Blissville.—Hardwood Lumber Co., H. F. Moeller; plans construction sewer and water systems.

La., Pineville.—City, U. T. Downs, Mayor; construct sewer system; vote March 23 on \$55,000 bonds. (Lately noted.)

Md., Cumberland.—City, Mayor Koon; plans improvements; extend and improve sewers, streets; build subways and conduits; contemplates voting \$1,000,000 bonds.

Mo., Kansas City.—Board Public Works; construct sanitary sewer and septic tank; \$63,500; Municipal Constr. Co., Contr.

N. C., Aberdeen.—Town, J. H. Johnson, Mayor; construct sewer and water systems; 2820 ft. 10-in. average depth 5-ft. sewers; 14,615 ft. 8-in. average depth 6-ft. sewers; sewer tank; bids until Feb. 10; J. B. McCrary Co., Engr., Atlanta, Ga. (See Machinery Wanted—Sewers.)

N. C., Cherryville.—City; plans construction \$75,000 sewer system and disposal plant; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

N. C., Forest City.—City, W. J. Davis, Clerk-Treas.; install sewer system; \$20,900; W. A. Bennett, Engr.-Contr., Rocky Mount, Va.; J. B. McCrary, Engr., Atlanta, Ga. (Previously noted.)

N. C., Graham.—City; voted \$100,000 bonds for sewers. Address The Mayor. (Lately noted to vote.)

N. C., Greensboro.—Proximity Mfg. Co., Julius W. Cone, Prest.; install \$750,000 sewer connections for 2000 houses in Proximity, Revolution and White Oak cotton-mill villages.

N. C., St. Pauls.—City; plans construction \$50,000 sewer system and disposal plant; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

Tex., Tyler.—City; voted \$100,000 bonds for sewer system improvements. Address The Mayor. (Lately noted to vote.)

Shipbuilding Plants.

Fla., St. Petersburg.—Ships.—Marine Ways Machine Co. inctd.; capital \$25,000; J. W. Appley, Prest.; J. B. White, Secy.

Md., Fairfield.—Steel Vessels.—Globe Shipbuilding & Dry Docks Co. of Maryland inctd.; \$5,000,000 capital; B. C. Cooke, Prest.; M. A. Leahy, Treas.; Frank Miller, Secy.; Jas. McKellar, Gen. Mgr.; offices in Fidelity Bldg., Baltimore; has 30-acre site with 1000-ft. deep-water frontage; build shipyard to include slips for 8000-ton floating dry dock, marine railway, iron foundry, woodworking shop, wharves with 4000 ft. dockage, etc.; purchased floating dry dock from Savannah (Ga.) Dry Dock & Repair Co. (Lately noted organized to build plant, etc.)

Va., Newport News.—Steel Ships.—Southern

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Shipyards Corp., O. A. Bloxom, Prest.; increase capital from \$200,000 to \$600,000.

Va., Norfolk—Steel Steamships.—Navy Dept., Bureau Yards and Docks, Washington, D. C.; erect 4-story 233x126x78-ft. 3-in. building at Navy-yard; specification 4011; Boyle-Robertson Construction Co., Contr., Washington, D. C.; \$384,981.

Telephone Systems.

Ark., Fort Smith.—Southwestern Bell Telephone Co.; plans \$200,000 improvements.

Ark., Little Rock.—Southwestern Bell Telephone Co., Mr. Poage, Gen. Mgr.; expend \$1,000,000 for extensions and improvements in Arkansas this year.

Tex., Eastland.—Southwestern Telegraph & Telephone Co.; erect 2-story brick exchange building; install equipment; switchboard with 8000-flashlight capacity; \$25,000.

Textile Mills.

Ala., Albany—Silk Products.—Chas. H. Eyster; build silk mill.

Ala., Crichton—Cotton Products.—Mobile Cotton Mills; increased capital from \$200,000 to \$3,000,000.

Ala., Huntsville—Ginghams.—Lowe Mfg. Co. increased capital from \$300,000 to \$550,000.

Ala., Ozark—Twine, etc.—Rainbow Mfg. Co., E. L. Dowling, Prest.-Treas.; erect 80x168-ft. mill-construction, wood, frame and brick foundation building; \$12,000; 2246 spindles; install \$30,000 mchy.; electric power from city; daily capacity 1200 lbs. wrapping twine, rope, etc.; W. M. Hunter, Archt.-Engr. (Lately noted organized, etc.)

La., New Orleans—Silk Hose.—Floradel Knitting Mills inceptd.; capital \$80,000; Chas. A. Kaufman, Prest.; Harold B. Kaufman, Secy.-Treas.; erect mill; Emil Weil, Archt.; Home Construction Co., Contr.

Mo., California—Woolen Cloth.—California Woolen Mills; improve and enlarge plant.

N. C., Belmont—Combed Yarn.—R. L. Stowe, S. P. Stowe; organize \$1,000,000 corporation; build 20,000-spindle combed-yarn mill; ordered mchy.

N. C., Belmont—Cotton Yarn.—A. C. Lineberger, J. E. Ford; organize \$600,000 company; build 10,000-spindle yarn mill; ordered mchy.

N. C., Belmont—Cotton Yarn.—A. C. Lineberger, D. P. Stowe; organize \$500,000 company; build 10,000-spindle yarn mill; ordered mchy.

N. C., Cherryville—Cotton Yarn.—Melville Mills; increase capital from \$189,000 to \$200,000; build addition.

N. C., Fayetteville—Cotton Products.—Corley Cotton Mills inceptd.; capital \$500,000; Clifton Corley, Jno. R. Tolar, R. M. Vanstony.

N. C., Gastonia—Cotton Yarn.—Adams-Spencer Yarn Mills inceptd.; capital \$400,000; W. H. Adams, J. R. Spencer, A. G. Ayers.

N. C., Gastonia—Cotton Yarn.—Samuel S. Shuford; organize \$200,000 company; build 5000-spindle fine-combed yarn mill.

N. C., Hendersonville—Hosiery.—Grey Hosiery Mills; construct \$50,000 addition.

N. C., Hickory—Cotton Yarn.—A. Alex. Shuford; organize \$500,000 company; build cotton-yarn mill; purchased mchy.

N. C., Hight Point—Cotton Yarn.—Thurlov Kearns; organize \$100,000 company; build yarn mill.

N. C., High Point—Cotton Yarn.—J. Hampton Adams, Robt. R. Reagan; build yarn mill.

N. C., Lexington.—Foy & Shemwell; establish mill.

N. C., Newton—Woolen Cloth.—Newton Woolen Mills chartered; \$100,000 capital; W. E. Bacon, A. B. Kuhn, G. D. Winecoff.

N. C., Troy—Cotton Products.—Rhyne-Anderson Mills Co., capital \$200,000, organized; E. O. Anderson, Prest.; D. E. Rhyne, V.-P.; H. C. Long, Jr., Secy.; David Clark, Treas.; install 5000 spindles. (Lately noted inceptd. under Candor.)

S. C., Darlington—Shirtings, etc.—Darlington Mfg. Co.; install 40 motors and generator in main mill; individual electric drives; J. E. Sirrine, Archt.-Engr., Greenville, S. C.

S. C., Greenville—Cotton Products.—Riverdale Mills; increase capital from \$75,000 to \$200,000.

S. C., Greenville—Cotton Products.—Saluda Mfg. Co.; increased capital from \$35,000 to \$250,000.

N. C., Mt. Holly—Cotton Yarn.—Alsace Mfg. Co. organized; capital \$250,000; C. E. Hutchison, Prest.; succeeds Mt. Holly Mills; build addition and remodel present building; J. A. Gardner, Contr., Charlotte; W. O. Pratt, Engineer, Mt. Holly. (Lately noted chartered.)

S. C., Rock Hill—Cotton Cloth.—Hamilton-Carhartt Cotton Mills advises Manufacturers Record: Double mill building, install 6000 spindles and 200 looms, build 30 cottages, provide water and sewer system, erect store, construct warehouse, all for No. 2 mill at Carhartt; enlarge dyehouse, add 1600 spindles and 40 looms, remodel cottages, all for No. 1 mill at Rock Hill. (Supersedes recent item.)

Tenn., Chattanooga—Hosiery Yarn.—Thatcher Spinning Co.; increased capital from \$40,000 to \$1,000,000; build 3-story mill and 4-story warehouse; reinforced concrete; Turner Construction Co., Contr., New York; install 30,464 spindles and electric-power drive; ordered \$650,000 mchy. (Supersedes previous item.)

Tenn., Chattanooga—Mercerized Yarn.—Dixie Mercerizing Co., T. H. McKinney, Gen. Mgr.; erect 2-story 240x100-ft. main structure and 1-story 380x100-ft. building; reinforced concrete; \$300,000; Mark J. Wilson & Co. and Parks & Co., Contrs.; install \$400,000 mchy. with electric-power drive; ordered this equipment; Lockwood, Greene & Co., Engrs.-Archts., Atlanta, Ga., and Boston, Mass. (Previously noted organized with \$750,000 capital, etc.)

Tenn., Chattanooga—Hosiery.—Richmond Hosiery Mill; build addition; \$10,000 to \$12,000; Mark K. Wilson, Contr.

Tex., Corsicana—Cotton Twine.—Navarro Mfg. Co. organized; \$200,000 capital; R. P. Wofford, Prest., Dallas, Tex.; Wm. C. Clarkson, Jr., V.-P.; S. W. Rabb, Secy.-Mgr.; erect 160x72 and 50x40-ft. mill-construction building costing \$80,000; install \$100,000 mill mchy., including 2500 spindles and \$6000 electric plant with belt drive; daily capacity 2500 lbs. twine; all contracts awarded; H. O. Blanding, Engr.-Archt. (Supersedes recent item.)

Water-works.

Ark., Blissville.—Hardwood Lumber Co., H. F. Moeller; plans construction water and sewer systems.

Ky., Georgetown.—City; plans water-works, electric-light and power-plant improvements; \$100,000 bonds. Address The Mayor.

La., Kaplan.—City, Eugene Eleazar, Mayor; improve water and light systems; \$40,000 bonds.

La., Pineville.—City, U. T. Downs, Mayor; construct water system; vote March 23 on \$55,000 bonds. (Lately noted.)

Md., Cumberland.—City, Mayor Koon; plans water-works extension; contemplates voting \$750,000 bonds.

Md., Frederick.—City; plans installation 750

to 1000 water meters in dwellings and business buildings.

Miss., Belzoni.—Town; improve water and light plants; pave streets; vote Jan. 29 on \$275,000 bonds. Address The Mayor.

N. C., Aberdeen.—Town, J. T. Johnson, Mayor; construct water and sewer systems; brick building; 150 G. P. M. triplex pump; 10 H. P. oil engine; 60,000-gal. tank on 75-ft. steel tower; 1950 lin. ft. 8-in. and 10,376 lin. ft. 6-in. C. I. pipe; 4.25 tons special castings; 6375 lin. ft. 1½-in. galv.-iron pipe; 5 8-in. and 15 6-in. H. E. gate valves and boxes; 12 1½-in. screwed valves and boxes; 23 standard fire hydrants; bids until Feb. 10; J. B. McCrary Co., Engr., Atlanta, Ga. (See Machinery Wanted—Water-works Equipment.)

N. C., Asheville.—City, G. G. Hunter, Secy.-Treas.; furnish and lay 3263 tons 16-in. bell and spigot C. I. pipe, 21.3 tons special castings, 51,300 lin. ft. 16-in. C. I. pipe, 53 16-in. tees and bends; bids until Feb. 12; B. M. Lee, City Engr. (See Machinery Wanted—Pipe.)

N. C., Asheville.—City, G. G. Hunter, Secy.-Treas.; construct water line to Ilea Tree watershed; supplement present supply; offer \$350,000 bonds on Feb. 2. (Supersedes previous item.)

N. C., St. Pauls.—City; plans construction \$50,000 water-works; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

Okla., Henryetta.—City, Ira Martin, Mayor; construct water-works; bids until Feb. 2. Lately noted voting \$200,000 bonds; Burns & McDonnell, Civil Engrs., Kansas City, Mo. (See Machinery Wanted—Water-works.)

Okla., Holdenville.—City; votes Jan. 23 on \$20,000 bonds for water-works improvement and power-station equipment. Address The Mayor.

Okla., Hugo.—City; construct filtration plant; voted \$75,000 bonds. Address The Mayor.

Okla., Madill.—City, F. L. Yarger, Clk.; extend water-works; construct 1,000,000-gal. daily capacity plant; 11 mi. 12-in. pipe line; pumping plant and main extensions; 225,000,000-gal. reservoir; voted \$410,000 bonds; Johnson & Benham, Constl. Engrs., Firestone Bldg., Kansas City, Mo. (Lately noted to vote.)

Okla., McAlester.—City, E. M. Fry, City Mgr.; construct dam for additional water supply; \$175,000; G. M. Brown, Engr. (Lately noted voting bonds.)

Tex., Harlingen.—Town; improve water-works in Dist. No. 1; \$653,500 bonds. Address The Mayor.

Tex., Wichita Falls.—City; voted \$800,000 bonds; to purchase water company's plant. Address The Mayor.

Woodworking Plants.

Ala., Luverne—Veneer.—E. S. Liles, George Miller; establish \$30,000 veneer plant.

Ark., Blytheville—Tubs.—Creamery Package Co.; rebuild burned tub mfg. department of plant; reported loss \$150,000.

Ark., Monticello—Handles.—International Handle Co., Fort Madison, Iowa; erect handle plant; contemplated.

Fla., Brookville—Furniture, etc.—N. P. Cuthen (lately noted to establish mill) has buildings; install mchy.; mfr. furniture and crates. (See Machinery Wanted—Woodworking Machinery.)

La., Lake Charles—Sawdust Products—Binders Products Co. inceptd.; build \$100,000 plant for sawdust products.

La., Waterproof—Staves.—Cardwell Lumber Co.; erect saw and stave mill; 60 employees' houses; later build veneer and box plant.

N. C. Conover—Carriages.—Jerome Bolick Sons' Co.; erect 60x150-ft. steel building; concrete foundation and floor; \$10,500; mfrs. carriages; Truscon Steel Co., Archt.-Contr., Youngstown, O.

N. C. Elizabeth City—Laths.—Dozier Lath Co. Inceptd.; capital \$5000; R. E. and M. Dozier, C. P. Pugh.

N. C. High Point—Panels.—Denny Roll & Panel Co. G. W. Denny, Mgr.; build 139x80-ft. addition; brick.

Va., Staunton—Wooden Ware.—Payne-Lambert Mfg. Co. Inceptd.; capital \$25,000; C. W. Lambert, Prest.; A. M. Stinson, Secy.

N. C. Rutherfordton—Handles, etc.—Oakwood Mfg. Co. reorganized; \$100,000 capital; J. L. Taylor, V.-P.; increase plant mfg. spokes, handles, rims, etc.

N. C. Thomasville—Furniture, etc.—Columbia Panel Mfg. Co. Inceptd.; capital \$100,000; R. R. Ragan, S. E. Tucker; both High Point, N. C.; T. O. Teague, Taylorsville.

Tenn., Memphis—Veneer, etc.—James E. Stark & Co., Jas. E. Stark, Prest.; plant improvements; erect band mill, increasing daily capacity from 60,000 to 75,000 ft.; enlarge veneer plant, increasing daily capacity from 40,000 to 75,000 ft.; reconstruct drykilns; enlarge boiler power plant.

Tenn., Memphis—Wagons.—James & Graham Co. organized; J. H. Redditt, Secy., 198 Jefferson Ave.; erect 1-story factory, 200x200-ft. warehouse, drykilns, etc.; Hanker & Cairns, Archts. (Lately noted reorganization, capital \$250,000, and contemplated construction.)

Tenn., Memphis—Caskets.—Tri-State Casket & Coffin Co. Inceptd.; capital \$200,000; T. H. Hayes, Prest.-Mgr.

Tenn., Nashville—Boxes.—John B. Ransom & Co.; erect \$50,000 box plant.

Tex., Dallas—Boxes.—Sillers Box Corp.; increased capital from \$35,000 to \$100,000.

Tex., Coleman—Oil Rigs.—A. L. Jones; has building; install planing mill to mfr. oil-rig timers.

Tex., Fort Worth—Furniture.—Hub Furniture Co., W. E. Austin, V.-P.-Gen. Mgr.; erect 4-story 80x100-ft. reinforced concrete storage building; \$70,000 to \$80,000; John J. Pollard & Co., Archt., Fort Worth National Bank Bldg.; C. M. Davis, Contr. (Lately noted to erect.)

Tex., Gatesville—Cedar Products.—Macbeth Cedar Products Co. Inceptd.; capital \$15,000; E. A. Macbeth, Y. J. Honeycutt, O. F. Wells.

Va., Richmond—Woodenware.—Richmond Cedar Works; rebuild burned portion plant; reported loss \$10,000.

Fire Damage.

Fla., Eau Gallie.—Kentucky Military Institute; loss \$50,000.

Ark., Pine Bluff.—Dick Barnett's residence; loss \$6000.

Fla., Limestone.—Limestone Mfg. Co.'s saw and planing mill; loss \$75,000.

Fla., Limestone.—Limestone Mfg. Co.'s \$50,000 lumber and crate material mill.

Fla., Seffner.—B. K. Pancoast's residence, Fertile Valley Farm.

Ga., Columbus.—S. P. Kissick's residence.

Ga., Demerest.—Mary J. Green Hall at Piedmont College; loss \$30,000.

Ga., Hazlehurst.—Bank of Hazlehurst; T. H. Weatherly's building.

Ky., Louisville.—Cottonseed Products Co.'s building; loss \$35,000.

Md., Baltimore.—Eastern Rolling Mills Co.'s electric generating plant, Baltimore St. and Sewer Rd.; loss \$35,000 to \$50,000.

Md., Hagerstown.—Mrs. Florence A. Harmon's hotel.

Miss., Tunica.—Tunica County Courthouse building; loss \$36,000.

Mo., Ash Grove.—Ash Grove Light & Power Co.'s plant; \$30,000.

N. C., Asheville.—Mrs. Carrie C. Mitchell's residence.

N. C., Charlotte.—Jno. B. Ross & Co.'s warehouse; loss \$5000.

N. C., Creedmoor.—G. S. Rogers' store; loss \$15,000.

N. C., Hot Springs.—Mountain Park Hotel; loss \$100,000. Address The Proprietor.

Okla., Bokchito.—Armstrong Academy; loss \$150,000.

S. C., Irmo.—Heber R. Dreher's residence near Selwood.

S. C., Lexington.—Henry P. Roberts' residence.

S. C., Rock Hill.—Dr. W. E. Simpson's residence.

Tenn., Dayton.—Dayton Veneering & Package Co.'s crate plant; loss \$10,000.

Tenn., Memphis.—Reed & Duecker's mill-supplies plant; loss \$100,000.

Tenn., Nashville.—Banner Publishing Co.'s plant; loss \$150,000.

Tex., Desdemona.—Restwell Hotel; loss \$50,000.

Tex., Flomot.—Tibbitt & Tibbitt Mercantile Co.'s building; loss \$15,000.

Tex., Marshall.—Marshall & East Texas R. R.'s machine shops; loss \$35,000.

Va., Atkins.—John C. Moomaw Co.'s kraut factory; loss \$18,000.

Va., Buffalo Ridge.—Esther Hunt's residence; loss \$5000.

Va., Dublin.—H. W. Vaughan's residence and outbuilding.

Va., Lumberton.—Frank Work's residence.

Va., Pulaski.—H. W. Vaughan's residence; loss \$5000.

Va., Richmond.—Richmond Cedar Works; loss \$10,000.

W. Va., Boomer.—George Hemming's residence.

W. Va., Huntington.—McCrory Five and Ten-Cent Store.

BUILDING NEWS

EXPLANATORY.

Buildings costing less than \$5000 not covered in these reports.

BUILDINGS PROPOSED

Apartment-Houses.

Ala., Selma.—Earnest Lamar; erect apartment-house; 3 stories; 39 suites; 156 rooms; brick; gravel roof; double floors of oak and tile; electric and gas lighting; bids opened in Feb.; William Leslie Welton, Archt., Birmingham. Address owner.

Fla., Miami.—Fred W. Cason; erect apartment building.

Ga., Athens.—Julian B. McCurry; erect apartment building.

Mo., Springfield.—S. E. Wilhoit, lessee; convert Landers Theater building into apartments; motion-picture theater, 1st floor; apartments above.

Mo., St. Louis.—Chas. Mueri, 3154 Grand Ave.; remodel 2 apartment buildings; 2 stories and basement; 25x40 ft.; day labor.

N. C., Rocky Mount.—T. A. Avera and others; promoting erection of \$400,000 apartment building; 6 stories; 1, 2, 3 and 4-room apartments; public dining-room and library; lobby, etc.

N. C., Shelby.—A. P. Weathers, C. T. Hord and others; remodel building for apartments.

S. C., Greenville.—E. M. Wharton; erect \$75,000 apartment building; 3 stories; 12 suites, 5 rooms each; brick; steam-heating plant; hardwood floors.

Va., Norfolk.—C. M. Weller, Dickson Bldg., Archt. for \$10,000 duplex apartment; 2 stories; 25x60 ft.; brick.

Va., Norfolk.—Agostini Bros., 330 Arcade Bldg.; erect \$60,000 apartment building, 18th and Omohundro Ave.; 4 stories; 13 suites; 3 stories; 55x135 ft.; brick; gravel roof; wood floors.

Va., Norfolk.—Dr. C. L. Harrell; erect \$52,000 apartment building; 8 suites.

Va., Norfolk.—George J. Tegg; erect \$7000 apartment; frame.

Association and Fraternal.

Ala., Montgomery.—Alabama Lodge of Perfection No. 1, A. F. and A. M., Lawrence H. Lee, Chrmn.; erect Scottish Rite cathedral; reinforced concrete and hollow tile; Spanish tile roof; cement and wood floors; hollow fireproof tile; metal ceilings; interior tile; W. H. Witcover, Archt., National Bank Bldg., Savannah, Ga. (Lately noted.)

Ky., Chavies.—Perry-Bell Coal Co.; erect Y. M. C. A. building. (See Dwellings.)

Ky., Hazard.—Carr's Fork Coal Co.; erect Y. M. C. A. building.

Ky., Lenoir.—Daniel Boone Coal Co.; erect Y. M. C. A. building. (See Dwellings.)

Ky., Louisville.—Kosair Temple, Ancient Arabic Order Nobles of Mystic Shrine, George W. Schardein, Illustrious Potentate; erect \$50,000 mosque; also banquet hall addition, cost 5000.

Ky., Sergeant.—Elkhorn Colliery Co.; erect Y. M. C. A. building. (See Dwellings.)

Ky., Sergeant.—Superior Colliery Co., U. S. Morris, Mgr.; erect Y. M. C. A. building. (See Churches.)

Mo., Marcelline.—Masonic Building Co., care W. W. Taylor; erect \$50,000 temple; 1st floor to be occupied by Marcelline Trust Co.; 3 stories and basement; 50x130 ft.; face brick; terra-cotta trim; composition roof; J. O. Hogg, Archt., 946 New York Life Bldg., Kansas City.

Okla., Okmulgee.—Benevolent Protective Order of Elks; erect \$85,000 building; 4 stories and basement; 56x140 ft.; brick; stone trim; reinforced concrete; composition roof; Smith, Rea, Lovitt & Senter, Archts., Parkinson Bldg.

S. C., Spartanburg.—Masonic Temple Corp., Ben Hill Brown, Prest.; erect \$150,000 temple.

Tex., Cisco.—Benevolent Protective Order of Elks; erect \$100,000 home.

Tex., Houston.—Houston Lodge No. 760, I. O. B. A.; erect building.

Tex., Temple.—Carnegie Library Assn.; erect building.

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Bank and Office.

Ala., Huntsville.—Huntsville Daily Times, J. E. Pieree, Editor and Gen. Mgr.; erect 10-story and basement office building; lately noted; 80x153 ft.; reinforced concrete, steel and stone; fireproof; basement, 1st and 2d floors to be occupied by The Times; 100 offices on 8 floors above; also erect business block adjoining for 5 stores; total cost \$200,000 to \$250,000. (See Machinery Wanted—Building Material; Structural Steel; Tile; Elevators; Roofing.)

Ark., De Witt.—First National Bank; expend \$15,000 improvements, to include installation steam heating plant, tile floors, ornamental plaster, etc.; Jno. P. Almand, Archt., Boyle Bldg., Little Rock.

Ark., Keo.—Bank of Keo; erect building.

Ark., Pine Bluff.—Durham Bros.; considering erecting office building, 60th and Main Sts.

Fla., Chiefland.—Bank of Chiefland, O. N. Harper, Prest.; erect building; 30x40 ft.; 1 story; brick and concrete; metal roof; concrete floors; flue and stove heat; steel and sash trim. (See Machinery Wanted—Building Material.)

Ga., Athens.—Athens Properties Co., capital \$250,000; plans to erect several office buildings, including 10-story structure.

Md., Baltimore.—Standard Oil Co., Pier 2, Pratt and Commerce Sts.; erect \$500,000 office building, Courtland and Franklin Sts.; 140x90 ft.; 6 stories; Clyde N. Friz, Archt., Lexington Bldg.

Md., Clinton.—Clinton Bank, care W. Gilbert Dent, 717 14th St., Washington, D. C.; erect \$15,000 building; A. P. Clark, Jr., Archt., 816 14th St. N. W., Washington.

Md., Silver Run.—A. W. Feeser; erect \$35,000 residence; 49x45 ft.; brick walls; wood joist and steel-metal lath; slate roof; wood joist and sub-floor; vapor-steam heat; brick and granolithic walks; bids until Feb. 14; Markley & Starr, Archts., Spooner Bldg., Harrisburg, Pa., contractors estimating; Roystone-Craig Engineering Co., 819 Equitable Bldg., Baltimore; Cline Bros., Littleton, Pa.; August Wildman, Harrisburg. Address owner.

Mo., Springfield.—Union Trust Co.; erect building.

Mo., St. Louis.—Emerson Electric Co.; erect \$400,000 building; 8 stories.

N. C., Edenton.—Citizens' Bank, H. C. Priott, Prest.; erect \$75,000 building; 2 stories; 50x75 ft.; limestone interior; composition roof; steam heat; electric lights; C. Gadsden Sayre, Archt., Anderson, S. C. (Previously noted.)

N. C., High Point.—Dyer Bros.; erect 2-story building; steel and concrete; foundation to permit erection 6 additional stories.

N. C., Kingston.—Farmers and Merchants' Bank; erect building.

Okla., Addington.—First National Bank; erect \$6000 building; 1 story; 25x60 ft.; brick, stone and reinforced concrete; contemplated.

Okla., Bristow.—Bristow National Bank; remodel building for bank; install front, rest-rooms, etc.

Okla., Comanche.—Farmers' State Bank; erect \$10,000 building; brick, stone and terra-cotta.

Okla., Oklahoma City.—Tradesmen's Bank, Frank J. Wilkoff, Prest.; erect bank and office building; previously noted; 10 stories; 60x90 ft.; steel frame; stone finish; Barrett Specification roof; concrete and marble floors; Otis elevators; \$500,000; Hawk & Parr, Archts., Security Bldg.; Reinhart & Donovan Co., Contr., 721 Insurance Bldg. (See Machinery

Wanted—Heating Plant; Bank Fixtures; Safe; Vault.)

Okla., Oklahoma City.—Company organizing to erect mercantile and office building, Main St. and Broadway; 74½x140 ft.; 21 stories, basement and sub-basement; steel; composition roof; concrete floors; \$1,500,000; other details not decided. Address W. L. Overholser, Colcord Bldg.

Okla., Pawhuska.—Citizens' National Bank; erect building.

S. C., Chester.—Drs. Ralph H. McFaddus, C. M. Rakestraw and others; erect bank and store building; 2 stories; tile; brick front; 3 stores, 1st floor; J. S. Starr, Archt., Rock Hill.

S. C., Greer.—Planters' Savings Bank; considering erecting \$35,000 to \$40,000 building; brick.

Tenn., Columbia.—Columbia Bank & Trust Co.; erect bank building.

Tenn., Maryville.—First National Bank; erect \$125,000 bank and office building; 60x160 ft.; brick and concrete; R. F. Graf & Sons, Archts., Knoxville. (Lately noted.)

Tenn., Memphis.—National City Bank, C. W. Thompson, Prest.; remodel present building and adjoining structure for banking-room and offices; install elevators.

Tex., Cisco.—Cowan Holcomb; erect \$100,000 office building.

Tex., Cuero.—First State Bank & Trust Co., F. W. Jaeggli, Prest.; erect 5-story bank and office building.

Tex., Lufkin.—Guaranty State Bank; erect \$120,000 bank and office building; 2 stories; brick and concrete.

Tex., Houston.—Houston National Exchange Bank, Henry S. Fox, Jr., Prest.; reported to erect \$750,000 to \$1,000,000 bank and office building; 105x73 ft.; 10 stories; plans not definite. (Previously noted.)

Tex., Smithville.—First National Bank, Roger Byrne, Prest.; remodel building for bank.

Va., Norfolk.—Bank of South Norfolk; erect \$25,000 building.

W. Va., Logan.—Bank of Logan, Paul Barrett, Prest.; erect \$20,000 building; 1 story; 51x26; brick walls; stone front; H. Rus Warne, Archt., Charleston.

W. Va., Welch.—First National Bank; erect several additional stories and improve building; Alex. B. Mahood, Archt., Law and Commerce Bldg., Bluefield, W. Va.

Churches.

Ala., Demopolis.—Methodist Church; erect \$8000 Sunday-school annex. Address The Pastor.

Ala., Tuscaloosa.—First Presbyterian Church, Rev. Mr. Boyd, Pastor; erect \$125,000 building; 100x110 ft.; brick; tile roof; wood floors; R. H. Hunt, Archt., James Bldg., Chattanooga, Tenn.

Ark., Jonesboro.—First Methodist Church, W. R. Struck, Chrmn. Board Trustees; erect \$175,000 building; stone; tile roof; Jno. P. Almand, Archt., Boyle Bldg., Little Rock. (Previously noted.)

Ark., Morrilton.—First Methodist Church; erect \$7000 parsonage; 1 story; 6 rooms; frame; Jno. P. Almand, Archt., Boyle Bldg., Little Rock.

Fla., Daytona Beach.—Methodist Episcopal Church, Rev. D. N. Rutter, Pastor; erect \$160,000 to \$125,000 building.

Ga., Atlanta.—Central Baptist Church, Rev. Caleb A. Ridley, Pastor; erect \$35,000 building; concrete, hollow tile and brick; stone trim; auditorium, seat 1800; Sunday-school

rooms, etc.; Weathers, Bradberry & Barlow, Archts.

Ga., Barnesville.—First Methodist Episcopal Church South, Rev. Frank Quillian, pastor; erect \$25,000 Sunday-school annex; 50x60 ft.; brick veneer; slate roof; wood and cement floor; steam heat; electric lights; hollow fireproof tile; metal ceilings; ornamental terra-cotta; rolling partitions; wire glass; vault lights. Address Frank Sullivan. (Lately noted.)

Ga., Rome.—Maple Street Baptist Church, Rev. H. F. Joyner, Pastor; erect community building.

Ky., Chavies.—Perry-Bell Coal Co.; erect church building. (See Dwellings.)

Ky., Hazard.—Carr's Fork Coal Co.; erect church building. (See Dwellings.)

Ky., Lennut.—Daniel Boone Coal Co.; erect church building. (See Dwellings.)

Ky., Mayking.—Pine Creek Coal Co.; erect church building. (See Dwellings.)

Ky., Sergeant.—Elkhorn Colliery Co.; erect church. (See Dwellings.)

Ky., Sergeant.—Superior Colliery Co., U. & Morris, Mgr.; erect church, school and Y. M. C. A. building.

Miss., Clinton.—Baptist Church; erect building; R. H. Hunt, Archt., James Bldg.

Mo., Kansas City.—Keneseth Israel Congregation, J. Viner, Prest.; erect \$300,000 temple.

Mo., Kansas City.—Morning Star Baptist Church; erect \$45,000 building; 65x80 ft.; brick and stone; oak and concrete floors; ornamental terra-cotta; bids opened about Apr. 1. Address Philip T. Drotts, Archt., 402 Reliance Bldg.

Mo., Kansas City.—First Swedish Baptist Church; erect \$50,000 building; 62x90 ft.; brick and stone; gravel roof; hardwood and concrete floors; interior tile; ornamental terra-cotta; bids March 1. Address Philip T. Drotts, Archt., 402 Reliance Bldg. (Lately noted.)

N. C., Albemarle.—First Prebyterian Church, W. E. Milton, Chrmn. Building Committee; erect \$50,000 building; brick and stone; slate roof; fan-furnace heat; ventilators; electric lights; construction by owner; C. Gadsden Sayre, Archt., Anderson, S. C.

N. C., Winston-Salem.—Calvary Moravian Church; erect addition. Address The Pastor.

Tex., Fort Worth.—Polytechnic Methodist Church, Rev. E. B. Hawk, Pastor; remodel and erect addition; \$25,000.

N. C., Charlotte.—Second Presbyterian Church, Rev. A. A. McGeachy, Pastor; remodel building and erect Sunday-school addition in rear; tentative plans call for 3-story structure; enlarge main auditorium, etc.; L. L. Hunter, Archt. (Previously noted.)

N. C., Huntersville.—Baptist Church; erect \$12,000 to \$15,000 building; 8 classrooms, auditorium. Address The Pastor.

N. C., Winston-Salem.—St. Paul's Church, George W. Orr, Chrmn. Building Comm.; erect parish-house containing auditorium, Sunday-school rooms; gymnasium; kitchen, etc.; Charles K. Bryant, Archt., Virginia Railway & Power Bldg., Richmond, Va.

Okla., Hugo.—Methodist Episcopal Church, W. H. King, Secy. Building Comm.; erect \$80,000 building; 2 stories and basement; 70x106 ft.; bids until Feb. 5; Hawk & Parr, Archts., 501 Security Bldg., Oklahoma City.

Okla., Okmulgee.—First Presbyterian Church, Rev. L. C. Walter, Pastor; erect \$75,000 building; 2 stories and basement; 65x120 ft.; brick; stone trim; composition roof; Smith, Rev. Lovitt & Senter, Archts., Parkinson Bldg.

Okla., Tulsa.—First Methodist Church, P. L. Price, Chrmn. Building Com., 404 S. Elwood

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Ave.; erect \$300,000 building; stone; Wight & Wight, Archts., First Natl. Bank Bldg., Kansas City, Mo. (Lately noted.)

S. C., Lowryville.—First Baptist Church, S. R. McAlley, Chrmn. Building Comm.; erect \$15,000 building; 38x75 ft.; 2 stories; frame, brick and granite rubble; composition shingle roof; cement and wood floors; steam heat; metal ceilings; steel ambles; J. S. Starr, Architect, Rock Hill. Address S. R. McAlley.

S. C., Walterboro.—Methodist Church; considering erecting building. Address The Pastor.

Tex., Houston.—Eastwood Episcopal Church; \$17,500 building and Sunday-school room; 1 story; tile and stucco.

Tex., San Antonio.—Trinity Methodist Episcopal Church, Rev. Harry C. Leonard, Pastor; erect \$75,000 building; reinforced concrete and brick; Gothic ornaments in cut stone; auditorium, seat 450; art-glass windows; Adams & Adams, Archts., Gibbs Bldg.; Francis S. Ankron, supervising construction; also contemplating erecting parish-house.

Tex., Sour Lake.—Methodist Church, Rev. H. V. Watts, Pastor; erect building.

Tex., Sugar Land.—Methodist Church, Rev. T. W. St. John, pastor; erect \$10,000 building.

Va., Portsmouth.—Mt. Hermon Baptist Church, colored, Rev. O. C. Jones, Pastor; erect \$40,000 building; 1 story; 55x80 ft.; brick and terra-cotta; Harvey N. Johnson, Archt., 325 Church St., receives bids about Feb. 15.

W. Va., Huntington.—St. Joseph's Church, Rev. H. B. Altmeyer, Pastor; remodel building; \$15,000; Mr. Sweeney, Archt.

City and County.

Ga., Macon.—Auditorium.—City; erect auditorium; Alfred Fellheimer, 5 E. 42d St., New York, and Alexander Blair, Macon, Archts.

Mo., Sedalia.—Jail, etc.—Pettis County votes Feb. 17 on \$165,000 bonds to include \$40,000 to improve county home and \$75,000 for jail. Address County Clerk.

Okl., Shawnee.—Fire Stations.—City votes Feb. 4 on \$100,000 bonds to improve fire department and erect 3 stations. (Previously noted.)

Tex., Temple.—Library.—Carnegie Library Assn.; erect building.

W. Va., Charleston.—Detention Home.—Kanawha County Court, Sam E. Childress, Prest.; purchased Capitol Hill site to erect detention home.

Courthouses.

Ky., McKee.—Jackson County Fiscal Court; erect \$50,000 courthouse; 2 stories; brick and stone; Milburn, Helster & Co., Archts., 710 14th St. N. W., Washington, D. C., will soon take bids to close about Feb. 1.

Miss., Tunica.—Tunica County Commrs.; erect courthouse to replace structure noted damaged by fire at loss \$36,000.

S. C., Columbia.—Richland County will petition Legislature for authority to vote on bonds to erect courthouse. Address County Clerk.

Dwellings.

Ark., Helena.—R. T. Doughtie; remodel residence; 2 stories and basement; shingle roof; wood floors; addition to heating plant; \$10,000; bids until Feb. 10. Address Mann & Gatling, Archts., 614-616 Scimitar Bldg., Memphis, Tenn. (Lately noted.)

Ark., McCrory.—Walter Fakes; erect \$10,000 bungalow; frame; steam heat; Jno. P. Almand, Archt., Boyle Bldg., Little Rock.

D. C., Washington.—John Warren; erect \$84,000 residence 16th St. N. W.; 3 stories and

English basement; brick and stone; D. Smith, Archt., Union Trust Bldg.

D. C., Washington.—Thos. Machen, Fidelity Bldg., Baltimore; preparing plans for \$30,000 dwelling, 16 N. Webster and Barnum Sts.; 2½ stories; 32x50 ft.; brick veneer and frame or hollow tile; slate roof; vapor heat; hardwood floors.

D. C., Washington.—W. L. Browning, Southern Bldg.; erect residence, Cleveland Park; 3 stories; brick.

D. C., Washington.—L. H. Meyers; erect \$15,000 residence and garage; 1½ stories; 32x60 ft.; brick; H. H. Warrick, Archt., 538 Munsey Bldg.

Fla., Daytona.—Julian A. Arroyo; erect dwelling; plans not yet developed.

Fla., Miami.—C. F. Wiebush; erect \$6000 residence; frame and stucco.

Ga., Augusta.—Jas. Pugh; erect \$5000 residence; 1 story and basement; 30x54 ft.; frame; shingle roof; Aurelius-Swanson Co., Archt., 1006 First National Bank, Oklahoma City, Okla.

Ga., Atlanta.—J. H. Whisenant; erect 4 dwellings; 6 rooms; brick veneer; composition roof; wood floors; steam heat, \$600; \$7500 each. (Lately noted.)

Ga., Rome.—Anchor Dock Mills, Mr. McLin, Supt.; erect 200 dwellings, hospital building and recreation hall.

Ga., Valdosta.—J. R. Dasher; erect bungalows; 5 to 6 rooms; stucco; shingle roof; wood floors. Address Lloyd Greer, Archt.

Ga., Valdosta.—D. W. Blooden; erect bungalows; 5 to 6 rooms; stucco; shingle roof; wood floors. Address Lloyd Greer, Archt.

Ky., Chavies.—Perry-Bell Coal Co.; erect 39 miners' dwellings, church, school and Y. M. C. A. buildings.

Ky., Domino.—Algoma Block Coal Co.; erect 19 or 12 miners' dwellings.

Ky., Frankfort.—B. F. McDonald; erect \$10,000 residence; brick; L. L. Oberworth, Archt., 210 E. Main St.

Ky., Hazard.—J. W. Baid; erect \$7500 residence.

Ky., Hazard.—Carr's Fork Coal Co.; erect 20 miners' dwellings, church and Y. M. C. A. building.

Ky., Hazard.—Eli Brashears; erect \$6000 residence.

Ky., Hazard.—J. B. Mullins; erect \$5000 residence.

Ky., Hazard.—L. F. Larkey; erect 3 dwellings; \$10,000.

Ky., Hazard.—W. A. Standfill; erect \$6000 residence.

Ky., Hazard.—F. W. Ficklen; erect \$5000 residence.

Ky., Lennut.—Daniel Boone Coal Co.; erect 19 miners' dwellings, church and Y. M. C. A. building.

Ky., Mayking.—Pine Creek Coal Co.; erect 12 miners' dwellings and church.

Ky., Russell.—G. A. Fowler; erect \$10,000 residence; 2 stories and basement; 22x36 ft.; brick veneer; Ralph Murray, Archt., Masonic Bldg., Ironton, O.

Ky., Sergeant.—Elkhorn Colliery Co.; erect number of miners' dwellings, church, school and Y. M. C. A. building.

Ky., Versailles.—H. Van Edwards; erect \$9000 residence; stone; L. L. Oberworth, Archt., 210 E. Main St.

La., Monroe.—Home Realty & Development Co., C. E. Slagle, Prest.; capital \$300,000; erect dwellings.

La., Waterproof.—Cardwell Lumber Co.; erect 60 dwellings for employees.

Md., Baltimore.—Fulton E. Yewell, 1714

Eutaw Pl.; erect 3 dwellings, 3500-04 Springdale Ave.; 2½ stories; \$15,000.

Md., Baltimore.—Arundel Corp., Fidelity Bldg.; considering erecting from 300 to 500 dwellings at Fairfield for employees of proposed plant of Globe Shipbuilding & Drydocks Co. of Maryland; details not determined.

Md., Baltimore.—Modern Homes Corp.; erect 9 dwellings, 2901-17 Westwood Ave.; 2 stories; \$13,000.

Md., Baltimore.—Columbia Construction Co.; erect 4 dwellings, northwest corner Reisterstown Road and Oakmont Ave., and 12 west side Oakmont Ave. near Reisterstown Road; 22x32 ft.; 2 stories; brick; \$26,000; Stanislaus Russell, Archt., 11 E. Lexington St.

Md., Baltimore.—Liberty Heights Development Co.; erect 14 dwellings, 552-578 University Parkway, Guilford; 2½ stories; brick and stone; \$140,000; Edwin H. Browne, Archt.

Md., Baltimore.—James F. Keely, 1123 Poplar Grove St.; erect 13 dwellings, 500 block Norman Ave., and 14 in 500 block Loudon Ave.; 2 stories; brick; \$54,000; F. E. Beall, Archt., 1335 N. Gilmor St.

Md., Chevy Chase.—Geo. Y. Worthington, Woodward Bldg., Washington, D. C.; erect \$15,000 residence; 2 stories and attic; 30x45 ft.; brick and stone; J. M. Donn, Archt., 1147 Connecticut Ave. N. W., Washington.

Miss., Charleston.—Dr. J. E. Frederick; erect residence; frame; composition roof; oak floors; heating not decided; R. H. Byrd & Co., Archts.; contract let within 60 days. (Lately noted.)

Miss., Clarksdale.—A. Sack; erect \$34,000 residence; 2 stories and basement; brick veneer; Spanish tile roof; wood floors; ornamental terra-cotta; concrete floors; ventilators; hot-water heat; electric lights; receives bids about Feb. 1. Address Mann & Gatling, Archts., 614-616 Scimitar Bldg., Memphis, Tenn.

Miss., Clarksdale.—L. B. O'Leary; erect residence.

Miss., Tchula.—T. J. Bogue; erect \$15,000 residence; also 10 additional dwellings.

Mo., Kansas City.—R. M. Anderson; erect residence; 2 stories and basement; 22x24 ft.; frame; construction by owner.

Mo., Kansas City.—Emil C. Hallar, 304 Reliance Bldg.; erect several dwellings; 32x26 ft.; frame and stucco; shingle and composition roof; oak floors; hot-water or steam heat; city lighting; plans and construction by owner. (Lately noted.)

Mo., Kansas City.—Allen A. Taylor; erect residence; colonial design; brick.

Mo., St. Louis.—W. P. Tobin of Tobin-Hamilton Leather Co.; erect residence.

Mo., St. Louis.—Home and Housing Association Board of Trustees; erect 200 dwellings.

Mo., St. Louis.—Paul Wielandy, 3200 Greet Ave.; remodel residence; \$5000.

Mo., St. Louis.—Feder-Arendes-Coller Realty Co.; erect 6 bungalows, 3900 block Humphrey St.; California type; 6 rooms; tile bath; furnaces; built-in book cases; open fireplaces; combination sleeping porches; sun parlors; wood floors.

N. C., Greensboro.—Pierce C. Rucker; reported to erect residence.

N. C., Fayetteville.—R. A. Algood; erect \$7000 residence; 2 stories and basement; 34x60 ft.; frame; brick piers; shingle roof; Aurelius-Swanson Co., Archt., 1006 First National Bank, Oklahoma City, Okla.

N. C., Winston-Salem.—C. M. Thomas; erect residence.

N. C., Raleigh.—J. Scott Thompson; erect \$5500 residence; 1½ stories and basement; frame; brick piers; shingle roof; Aurelius-

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Swanson Co., Archt., 1006 First Natl. Bank Bldg., Oklahoma City, Okla.

Okla., Altus.—Geo. C. Wright; erect \$6000 residence; 2 stories and basement; 30x54 ft.; frame; brick piers; shingle roof; Aurelius-Swanson Co., Archt., 1006 First Natl. Bank, Oklahoma City.

Okla., Duncan.—Art Coombs; erect several dwellings; brick; shingle roof; \$6000 each; contemplated.

Okla., Duncan.—E. O. Sloan; erect several bungalows; brick and stone; shingle roof; \$7500 each; contemplated.

Okla., Chichasha.—Elmer Terrell; remodel residence; metal tile roof; tile for porches and bath; \$10,000; hot-water heat, \$1000; bids until Feb. 16. Address A. L. Christenberry, Archt., Southwest Natl. Bank Bldg., Oklahoma City. (See Machinery Wanted — Heating Plant; Tile.)

Okla., Pawhuska.—Harry D. Joll; erect rooming-house; 60 rooms; ultimate plans call for 120-room structure.

Okla., Tulsa.—G. Earl Shaffer; erect \$12,000 residence; 2 stories and basement; 31x46 ft.; frame; shingle roof; G. A. Nichols, Inc., Archt., 301 Southwest Natl. Bank Bldg., Oklahoma City.

Okla., Tulsa.—Neil G. Grubb; erect \$25,000 residence and garage.

Okla., Tulsa.—Geo. Bynum; erect \$6000 residence and garage.

Okla., Tulsa.—L. J. Shumway; erect \$6000 residence and garage.

Okla., Tulsa.—W. M. Martin; erect \$6000 residence and garage.

Okla., Tulsa.—R. K. Hughes; erect eight dwellings; \$22,000.

Okla., Tulsa.—W. A. Moore; erect \$38,500 residence and garage.

Okla., Tulsa.—Moore & Chandler; erect \$25,000 residence.

S. C., Carhartt.—Hamilton Carhartt Cotton Mills, Rock Hill; erect 30 cottages in connection with Mill No. 2; water and sewer system; also erect store and 70-ft. addition to cotton warehouse.

S. C., Greenville.—Rosa K. Ashmore; erect \$8000 residence; 2 stories.

S. C., Rock Hill.—Hamilton Carhartt Cotton Mills; repaint, remodel, install bathroom fixtures, etc., in block of tenant-houses in connection with Mill No. 1.

Tenn., Chattanooga.—Chamber of Commerce; promoting organization of company to erect dwellings; R. T. Faucette, Chmn. of Comm.

Tenn., Memphis.—Tom Vinton, Jr.; erect 2 dwellings; 1 story; 6 rooms; frame and stucco; \$8000.

Tenn., Memphis.—Mrs. S. S. Taylor; erect 3 dwellings; 1 story; 7 rooms each; frame and stucco; \$15,000.

Tex., El Paso.—Cole Bros.; erect 2 bungalows, Cotton Addition; brick; \$10,000.

Tex., Fort Worth.—T. B. Hoffer of Fensland Oil Co.; erect residence.

Tex., New Boston.—W. A. Lowery; erect \$6000 residence; 1 story; 32x55 ft.; frame; shingle roof; Aurelius-Swanson Co., Archt., 1006 First Natl. Bank, Oklahoma City.

Tex., San Antonio.—W. H. Hearne; erect \$5000 residence; 6 rooms.

Tex., San Antonio.—H. C. Thorman; erect dwellings; 5 rooms; \$6000.

Tex., San Benito.—E. H. Downs; erect \$6000 residence; 1 story and basement; 36x32 ft.; frame; stucco piers; shingle roof; Aurelius-Swanson Co. Archt., 1006 First Natl. Bank Bldg., Oklahoma City.

Tex., San Benito.—E. H. Bowns; erect \$6000

residence; 1 story and basement; 36x32 ft.; stucco piers; frame; shingle roof; Aurelius-Swanson Co., Archt., 1006 First Natl. Bank Bldg., Oklahoma City.

Tex., Waxahachie.—Chamber of Commerce; promoting organization of company to erect dwellings.

Va., Cape Charles.—C. H. Plston; erect \$15,000 residence; 1 story; 35x50 ft.; brick; Diehl & Vance, Archts., Virginia-Carolina Bldg., Norfolk.

Va., Cape Charles.—Mrs. Ada Hembrick; erect \$15,000 residence; 1½ stories; 28x47 ft.; Diehl & Vance, Archts., Virginia-Carolina Bldg., Norfolk.

Va., Cheriton.—Mrs. Nellie Nottingham; erect \$10,000 residence; 2 stories; 38x25 ft.; pressed brick; Diehl & Vance, Archts., Virginia-Carolina Bldg., Norfolk, receives bids until Feb. 1.

Va., Graham.—W. V. Yost; erect several dwellings.

Va., Emporia.—J. Dudley Woodward, Wilherrin Farm, Branchville; erect \$16,000 residence; 1½ stories; 28x50 ft.; shingle; Diehl & Vance, Archts., Virginia-Carolina Bldg., Norfolk.

Va., Lynnhaven.—Rufus W. Parks; erect \$20,000 residence; 2 stories; 35x80 ft.; frame; Calrow, Wrenn & Tazewell, Archts., New Monroe Bldg., Norfolk; construction by owner.

Va., Newport News.—McKee, Williams & Pettibone, 25 28th St., Archts., to remodel residence, 2806 West Ave.; 2 stories; frame and stucco; \$12,000.

Va., Newport News.—Mac Levinson, Levinson Packing Co., 2612 Jefferson St.; erect \$20,000 building; 2 stories; 29x42 ft.; brick; McKee, Williams & Pettibone, Archts., 225 28th St.

Va., Newport News.—Hopkins Land Co., Chas. Hopkins, Prest.; erect 19 dwellings; 2 stories; 18x25 ft.; frame; McKee, Williams & Pettibone, Archts., 225 28th St.

Va., Norfolk.—R. B. Myers; erect 3 dwellings; frame and shingle; \$54,000.

Va., Norfolk.—John S. Saunders; erect 2 dwellings; \$18,000.

Va., Norfolk.—Jas. Hunting; erect \$6000 residence; 1½ stories; 26x38 ft.; frame; C. M. Woller, Archt., Dickson Bldg.

Va., Norfolk.—Mrs. John F. Hayes; erect \$7000 residence, Villa Heights; frame; 2 stories; 30x40 ft.

Va., Portsmouth.—H. A. Parker, Prest. Parker Hosiery Mills; erect \$35,000 residence; 3 stories; 52x62 ft.; brick; R. D. Mitchell, Archt., Seaboard Bank Bldg., Norfolk.

Va., Virginia Beach.—Arthur Jones; erect \$7500 residence; 1 story and basement; 30x60 ft.; frame and stucco; Neff & Thompson, Archts., Seaboard Bank Bldg., Norfolk.

W. Va., Bluefield.—A. W. Nixon; erect 2 dwellings; \$9500.

W. Va., Bluefield.—A. M. West; erect \$5000 residence.

Va., Warrenton.—R. R. Barrett; erect \$50,000 residence, garage and servants' quarters; 2½ stories and basement; stone; Waddy B. Wood, Archt., 816 Connecticut Ave. N. W., Washington, D. C.

W. Va., Bluefield.—Joseph Holt; erect \$20,000 residence; 2 stories and basement; 30x50 ft.; brick and stucco; Alex. B. Mahood, Archt., Law and Commerce Bldg.

W. Va., Huntington.—Frank T. Marshall; erect \$12,000 residence; 2 stories and basement; 10 rooms; frame; L. F. Dean, Archt., Foster Bldg.

Hospitals, Sanitariums, Etc.

Ark., Little Rock.—Arkansas Children's Home Finding Society, O. P. Christian, Supt.; erect \$300,000 building; 3 stories; brick; fireproof; slate roof; electric elevators; steam heat; Jno. P. Almand, Archt., Boyle Bldg. (Lately noted.)

Ga., Rome.—Anchor Duck Mills, Mr. McLin, Supt.; erect hospital building. (See Dwellings.)

Ky., Hazard.—Hazard Coal Operators' Exchange, E. L. Douglas, Prest., Cincinnati, O.; erect hospital.

La., Baton Rouge.—Charity Ward Assn.; erect hospital, Maximilian St.; 3 stories; brick.

N. C., Asheville.—C. B. Suker; erect \$130,000 sanitarium.

Tenn., Memphis.—Gartly-Ramsay Hospital; erect \$100,000 sanitarium; improve grounds, etc.

Va., Norton.—Drs. R. P. Carr, W. R. Williams, Richlands, Va., and others; erect hospital.

Hotels.

Ala., Lineville.—Lineville Co.; erect hotel on site of Hotel Barfield.

Fla., St. Petersburg.—Frank P. Cavanagh; reported to erect 250-room hotel at St. Petersburg Beach; leased Casino and other resorts.

Ga., Eatonton.—L. M. Pennington of Hearn & Green Hardware Co.; promoting erection Eatonton Hotel; 3 stories; brick; electric lights; steam heat; 30 rooms with private bath; \$30,000. (Lately noted.)

Ga., Macon.—A. E. Weems; expend \$15,000 to \$20,000 to repair, redecorate, install telephones, etc., in Brown House.

Miss., Starkville.—Starkville Improvement League; promoting erection \$100,000 hotel.

Miss., Vicksburg.—P. L. Hennessey & Bro.; erect 20-room addition to Carroll Hotel.

Mo., St. Louis.—D. Israel, 5129 Enright St.; reported to erect \$350,000 hotel; 8 stories; 49x109 ft.; J. M. Hirschstein, Archt., 577 De Diverville St.

N. C., Warrenton.—Warren Hotel Co.; erect \$70,000 hotel; 3 stories and basement; 30 rooms, 15 with private bath. (Previously noted.)

Tex., Brownwood.—Brooke Smith; erect additional story to hotel; 50x80 ft.; hollow fireproof tile; plaster board; mill construction; pine floors; Otis elevator; bids opened about Mch. 1; Henry Mount, Archt. (Lately noted.)

Tex., Lufkin.—D. A. Campbell; erect 3-story hotel; brick, concrete and steel; hardwood floors; 25 baths; private telephones; dining hall and cafe on 1st floor; \$185,000.

Va., Clifton Forge.—Cosmos Hotel Co., J. C. Carpenter, Jr., Prest.; erect \$150,000 hotel; 7 stories; 40x100 ft.; brick and concrete; 300 rooms; Chas. M. Robinson, Archt., Times-Dispatch Bldg., Richmond. (Previously noted.)

Va., Williamsburg.—Williamsburg, Inc., F. G. Linekin, Secy.; erect \$150,000 tourist hotel. (Lately noted.)

Miscellaneous.

Ark., Helena.—Clubhouse.—Helena Country Club, Gilbert Yaeger, Secy.; erect \$35,000 clubhouse; 60x125 ft.; stucco and frame; shower baths; heating plant; 300 lockers. Address Mann & Gatling, Archts., Scimitar Bldg., Memphis, Tenn. (Lately noted.)

Ga., Griffin.—Clubhouse.—Country Club Realty Co., B. R. Blakely, Prest.; construct building.

Ga., Macon.—Amusement Park.—Richard C.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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Baker; promoting establishment of \$100,000 amusement park.

Ga., Rome — Recreation. — Anchor Duck Mills, Mr. McLin, Supt.; erect recreation hall. (See Dwellings.)

La., New Orleans—Clubhouse.—New Orleans Federation of Business and Professional Women; erect clubhouse.

Miss., Meridian — Fair. — Mississippi-Alabama Fair Assn.; erect several brick buildings.

Miss., Yazoo City — Memorial. — Vicksburg-Warren County Memorial Assn.; plans erection \$10,000 memorial.

Mo., St. Louis—Clubhouse.—Normandie Golf Club, J. B. Smutz, Prest.; Laclde Gas Bldg.; erect \$75,000 clubhouse; 2 stories; 100x275 ft.

Tenn., Knoxville—Restaurant.—Mrs. Amella Russell; erect restaurant; 2 stories; brick; offices on 2d floor; also erect 25x30-ft. garage; brick; W. H. Gildard, Archt.

Tex., Lockhart—Barn.—T. I. Branyon; erect 40x60-ft. barn; frame; iron roof; concrete floors. (Lately noted damaged by fire.)

Railway Stations, Sheds, Etc.

Okl., Bristow.—St. Louis & San Francisco R. R., F. G. Jonah, Ch. Engr., Railway Exchange Bldg.; St. Louis; enlarge freight and passenger station; \$9000.

Schools.

Ala., Birmingham.—Alabama Boys' Industrial School, East Lake; expend \$50,000 for improvements.

Ala., Florence.—City School Board; erect 10-room brick school; auditorium to seat 55; \$75,000. (Previously noted.)

Ala., Rogersville.—City considering issuing \$40,000 bonds to erect brick school; Dr. A. L. Weaver, Mayor.

Ark., Conway. — Central College Trustees; plan to erect \$150,000 building.

Ark., Arkadelphia.—Henderson Brown College; erect \$20,000 annex to Key Hall; 3 stories; brick; fireproof; Jno. P. Almand, Archt., Boyle Bldg., Little Rock. (Lately noted.)

Ark., Little Rock. — School Board; erect \$150,000 to \$200,000 junior high school in eastern section of city; Sanders & Ginochio, Archts.

Ark., Morrilton.—School Board; erect \$130,000 high school; 2 stories and basement; brick and stone; asphalt roof; fireproof; steam heat; Jno. P. Almand, Archt., Boyle Bldg., Little Rock.

Fla., Orlando.—Board of Education; considering \$150,000 bond issue for schools.

Fla., Ocala.—State Board of Control, J. B. Hodges, Chrmn., Tallahassee; erect \$40,000 laundry, \$10,000 hospital and \$15,000 dormitory at Girls' Industrial School; brick; slate roof; pine floors. (Lately noted.)

Fla., Pensacola.—Escambia County Board of Public Instruction; erect 3-story fireproof high school; 240x50 ft.; wing, 62x100 ft.; composition roof; wood and tile floors; steam heat; plans and specifications at office Walker D. Willis, Archt., Blount Bldg.; bids until Feb. 9. (Lately noted.)

Ga., Americus.—Sumter County Board of Education, E. J. McMath, Supt.; consolidate Pleasant Grove, Gammage and New Era Dists.; erect school.

Ga., Atlanta.—Board of Education, W. F. Dykes, Supt.; erect \$150,000 junior high school on Washington St.; 40 rooms; brick. (Lately noted considering \$2,000,000 school bonds.)

Ga., Elberton.—Board of Education, W. O. Jones, Chrmn.; bids until Feb. 17 to erect

colored school and auditorium adjoining present building; plans for former provide brick and hollow-tile construction; hot-air heat; plans on file at office Superintendent of Schools, obtainable at office Willis Irvin, Archt., Lamar Bldg., Augusta. (Previously noted in part.)

Ga., Lincolnton.—Town Council receives bids at office Saml. L. Wilkes, Mayor, until Feb. 16 to erect 2-story brick and hollow tile school; 50x90 ft.; tar and gravel roof; maple floors; hot-air heat; plans and specifications at office Mayor and obtainable at office Willis Irvin, Archt., Lamar Bldg., Augusta. (Previously noted.)

Ga., Savannah.—Pape School, A. E. Lawson, Jr., Chrmn. Com.; erect executive building; right wing for cafeteria; left wing, kindergarten section; gymnasium; construct several tennis courts, basket-ball courts, etc.

Ky., Lexington.—Board of Education, C. R. Norwood, Prest.; erect white high school and 2 negro high schools; hollow fireproof tile; ornamental terra-cotta; interior tile; metal doors; total cost \$400,000. Address Frankel-Curtis Co., Archt. (Lately noted.)

Ga., Thomasville. — City voted \$100,000 bonds to erect school. Address Board of Education. (Previously noted.)

Ky., Chavies.—Perry-Bell Coal Co.; erect school. (See Dwellings.)

Ky., Sergeant.—Superior Colliery Co., U. S. Morris, Mgr.; erect school. (See Churches.)

Ky., Sergeant.—Elkhorn Colliery Co.; erect school. (See Dwellings.)

La., Alexandria.—Rapides Parish School Board, J. W. Bolton, Prest.; bids until Feb. 16 to erect 2-story-and-basement brick school; pine floors; steam heat; 20 classrooms; \$90,000; plans and specifications at office Favrot & Livaudais, Archts., Title Guarantee Bldg., New Orleans. (Lately noted.)

La., Jennings. — Jefferson Davis Parish School Board, W. P. Arnett, Secy.; bids until Feb. 16 to erect high school on North Side and graded school on South Side; former, brick and concrete; vacuum cleaning system; program clock; auditorium; gymnasium; steel lockers; manual training department, commercial department, etc.; plans and specifications on file at office Mr. Arnett, obtainable at office F. W. Steinman Son, Archts., Beaumont, Tex. (Lately noted.)

La., Shreveport.—School Dist. No. 1 voted \$500,000 to erect schools; C. E. Byrd, Supt. Caddo Parish School Board. (Lately noted.)

Md., Centerville. — Queen Anne's County Board of Education, B. J. Grimes, Supt.; contemplates erecting 4-room building, 2-room building, five 1-room buildings; top flooring 25 rural schools, 5 storm doors or vestibules on rural schools, build sanitary closets at 60 rural schools; probable cost \$35,000.

Md., Belair.—Harford County School Board, A. Milton Wright, Supt.; erect 1-story addition to school; 30x33 ft.; brick; Jno. B. Hammer, Archt., 31 N. Market St., York, Pa.

Md., Cumberland.—Allegany County School Board will call election on \$700,000 bonds for school improvements: Addition to Luke school; buildings at Westernport; alterations and improvements at Barton and Midland; completion of building plans at Lonaconing and Frostburg; improvements at Eckhart; addition to Columbia Street School and auditorium for Pennsylvania Ave. building, Cumberland, with additional heating; addition to colored school, Cumberland, or new building; building for Flintstone Agricultural High School; additional buildings for Cumberland and building at Lindernville.

Miss., Suqualena. — Lauderdale County Board of Supvrs., Geo. F. Hand, Clerk, Meridian; considering issuing \$5500 bonds to erect school and principal's residence.

Mo., Cape Girardeau.—Board of Education, Elizabeth Walther, Secy.; erect \$30,000 vocational school; also \$55,000 grade school; both structures brick; stone trim; composition roof; J. H. Felt & Co., Archts., Grand Ave. Temple Bldg., Kansas City.

Mo., Springfield. — City defeated \$800,000 bonds issue to erect \$175,000 Junior High School, improve grade schools, etc.; W. W. Thomas, Supt. of Schools. (Lately noted.)

N. C., Asheville.—Turkey Creek Consolidated School Dist. (Cross Roads, Fairview and Highland) voted \$12,000 bonds to erect school. Address Buncombe County Board of Education. (Previously noted.)

N. C., Concord.—Concord Graded School Board, A. S. Webb, Secy.; erect 10-room-and-basement brick building; bids opened Jan. 30.

N. C., Gastonia.—Board of School Commrs. considering calling election on \$550,000 school bonds.

N. C., Graham.—City voted \$50,000 school bonds. Address Board of Education.

N. C., Oak Ridge.—Oak Ridge Institute, T. E. Whitaker, Prest.; plans erection \$65,000 dormitory; fireproof; brick; 3 stories; 58 rooms; W. Armfield, Archt., Greensboro.

N. C., Wilson.—School Board; plans erection building.

Okl., Ardmore.—Board of Education, C. W. Edwards, Clk.; erect \$250,000 junior high school; 170x121 ft.; brick, concrete and steel; composition roof; tile, concrete and hardwood floors; direct radiation heat with separate ventilating; ready for bids about Mar. 1; J. B. White, Archt. (Lately noted.)

Okl., Coyle.—School Board; erect \$40,000 consolidated school.

Okl., Okmulgee.—Board of Education, R. W. Adkinson, Clk.; erect Capital Heights School; 4 units; 1 story and basement; 56x100 ft.; East Side School; 2 units; 1 story and basement; 56x50 ft.; both structures brick and terra-cotta; stone trim; composition roof; also \$90,000 school; 1 story and basement; 100x175 ft.; brick; stone trim; composition roof; Smith, Rea, Lovitt & Senter, Archts., Parkinson Bldg. (Lately noted.)

Okl., Park Hill.—Cherokee Orphan Training School Trustees; expend \$71,000 for improvements.

S. C., Greenville.—Greenville Woman's College, Dr. David M. Ramsay, Prest.; erect fine arts building; auditorium to seat 1300; 3 stories; Doric columns; \$250,000. (Lately noted.)

S. C., Greenville.—Furman University, Dr. W. J. McGlothlin, Prest.; erect Webb Infirmary; \$25,000; E. S. Draper, Landscape Archt., Charlotte.

S. C., Greenville.—Legislature considering bill authorizing vote on \$250,000 school bonds. Address Board of Education. (Previously noted to erect \$150,000 high school.)

Tex., Dallas.—Board of Education; erect high school; Wm. B. Ittner, Archt., Board of Education Bldg., St. Louis.

Tex., Goldsboro. — School Board; erect teacherage; vote on bonds.

Tex., Houston.—Rice Institute; erect \$50,000 community-house; contain girls' dormitory, chapel, cafeteria, ballroom, etc.; Rev. Harris Masterson in charge.

Tex., Kenedy.—Kenedy Independent School Dist.; erect \$60,000 school; brick; Ralph H. Cameron, Archt., San Antonio. (Lately noted.)

Tex., Pampa.—Pampa Independent School Dist., L. C. McMurtry, Secy. Board of Di-

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

rectors; bids until Jan. 31 to erect one brick school in town of Pampa, five 1-room brick buildings and one 2-room brick bungalow in county; bids collectively and on school to be erected in Pampa separately and on county buildings collectively; plans and specifications at office Mr. McMurtry and office W. R. Kaufman, Archt., Amarillo. (Previously noted.)

Va., Ferrum. — Ferrum Training School; erect parsonage; 2 stories; 34x40 ft.; frame; asbestos shingle roof; pine floors; steam heat; electric lights; construction by force account; Geo. R. Ragan, Archt., Roanoke. Address Rev. B. M. Beckham, Ferrum. (Lately noted.)

Va., Portsmouth. — Norfolk County Board of Supervisors; considering \$200,000 bond issue to erect schools in Butt's Road and Pleasant Grove Dist.

W. Va., Bancroft. — Board of Education, W. M. Walters, Secy.; erect \$16,000 school; 2 stories and basement; 70x60 ft.; concrete block; wood floors; owner buys material; day labor; C. M. Lloyd, Archt., care owner.

W. Va., Chester. — Board of Education, Hugh B. Lynch, Pres.; erect \$75,000 school; 2 stories; fireproof; brick; bond election Jan. 31.

W. Va., Huttonsville. — Huttonsville School Dist. voted \$30,000 bonds to erect high school; brick. Address Board of Education.

Stores.

Ark., Ashdown. — Texas Produce Co., C. A. Bishop, Mgr.; erect 100x150-ft. building.

Ark., Bentonville. — W. T. Ivey; erect business building.

Ark., Little Rock. — E. W. Jenkins; erect 1-story brick building; \$18,000.

Fla., Dade City. — J. R. Williams; erect business building.

Fla., Fort Lauderdale. — Crim & Son; erect 3-story building; 50x150 ft.; foundation to permit erection 5 or 6-story structure.

Fla., Jacksonville. — J. C. Pritchard; erect \$6000 building.

Fla., Jacksonville. — T. H. Cooper; rebuild store; \$5000.

Fla., Jacksonville. — O. P. Woodcock; permit to erect building at Riverside Ave., between Forrest St. and Lackawanna Ave.; \$9000; also store at 825 Kings Rd.; \$8500.

Fla., New Smyrna. — Jno. T. Hammond; erect 2-story brick store and office building.

Fla., Plant City. — Williams Seed Co. (main office, Norfolk, Va.), H. A. Patterson, Local Mgr.; erect building; contemplated.

Fla., Tampa. — Maas Bros.; remodel building, Franklin and Zack Sts., for store and offices; also erect \$175,000 to \$250,000 addition in rear, to be connected by bridge; reinforced concrete; 7 stories; faced brick; F. J. Kennard, Archt.

Miss., Clarksdale. — W. K. Herrin, Jr.; remodel old Willis Bldg. and erect building adjoining.

Miss., Clarksdale. — L. E. Warren; erect 2-story brick building.

Miss., Crystal Springs. — B. T. Bennett; reported to erect 4 brick business buildings.

Miss., Tchula. — S. J. Foote; erect 3 brick store buildings.

Mo., St. Louis. — Jas. H. Forbes Tea & Coffee Co.; erect \$200,000 building; 5 stories.

Mo., St. Louis. — M. Goldman, care Goldman Bros., 1104-8 Olive St.; reported to erect \$300,000 store addition; 6 stories; 25x109 ft.

Mo., St. Louis. — J. A. Hutchinson; erect \$30,000 building; 2 stories.

N. C., Asheville. — Investors' Land Co.; plans to erect several buildings on Patton Ave.

N. C., Winston-Salem. — Gorrell Bros.; erect 2 stores.

Okla., Blanchard. — R. W. Mangum; erect 3 brick buildings.

S. C., Carhartt. — Hamilton Carhartt Cotton Mills, Rock Hill; erect store in connection with Mill No. 2. (See Dwellings.)

S. C., Greenville. — Marshall B. Provost; erect store building.

Tenn., Chattanooga. — D. B. Loveman; remodel building; provide show windows; lower floor, etc.; Wm. Crutchfield, Archt. (Lately noted.)

Tenn., Knoxville. — J. S. Sample; erect brick business building.

Tenn., Knoxville. — Herman Aurin; erect brick building; W. H. Gildard, Archt.

Tenn., Knoxville. — Sterchi Bros.; erect \$225,000 building; 75x140 ft.; 10 stories, basement and sub-basement; reinforced concrete and terra-cotta; Barrett specification roof; reinforced concrete; vacuum steam heat; passenger and freight elevators. Address R. F. Graf & Sons, Archts. (Lately noted.)

Tenn., Knoxville. — Chas. Marsh; erect building; brick; W. H. Gildard, Archt.

Tenn., Knoxville. — Langston & Chesney; alter and erect 60-ft. addition to building; construct plate-glass front, etc.

Tenn., Memphis. — R. M. Hammond of Hammond & Sons; erect \$30,000 building; 2 stories; steel and concrete; foundation to permit erection additional stories.

Tenn., Memphis. — H. Dlugash; erect 3-story brick and concrete business building; 75x165 ft.; also erect concrete and brick garage; contract let for latter.

Tex., Beaumont. — A. Siman, San Antonio; reported to erect \$75,000 building; 75x300 ft.

Tex., Dallas. — Sears, Roebuck & Co., Harry M. Rubel, V. P.-Gen. Mgr. (main office, Chicago); erect \$800,000 addition; 9 stories; ultimate plans involve expenditure of \$1,500,000 to \$2,000,000.

Tex., El Paso. — Management Tooley Bldg., Chihuahua and San Francisco Sts.; erect \$45,000 additional story.

Tex., Orange Grove. — L. W. Mumme; rebuild store building recently damaged by fire.

Va., Danville. — August Ellwanger; erect 2-story brick store building; 20x50 ft.; Heard & Chesterman, Archts.

Va., Norfolk. — S. Will Steel, 64 W. 14th St., New York; remodel 1st floor of Holland Apt. for 7 stores; Neff & Thompson, Archts., Seaboard Bank Bldg., Norfolk.

Va., Norfolk. — J. Yavner, South Norfolk; erect hardware and dry goods store; apartments above.

Va., Richmond. — Davis Land Co.; erect \$10,000 store and flat; 2 stories; 49x50x24 ft.; brick; construction by owner.

Va., Roanoke. — Boswell Realty Co., Agts. for Braxton D. Gibson and others; erect 30x200 ft.; H. M. Miller, Archt.

W. Va., Huntington. — Paul Dober, 9th St.; rebuild store previously noted damaged by fire; 4 stories and basement; 45x200 ft.; brick; stone trim; wood floors; steel columns and beams; \$70,000; W. B. Smith, Archt., R. & P. Bldg.

W. Va., Huntington. — Hub Clothing Co., M. Goldman, Propr.; erect 3-story brick building.

W. Va., Logan. — E. Abramson; erect \$35,000 store and apartment; 54x110 ft.; 2 stories and basement; brick; stone trim; wood floors; Richard M. Bates, Archt., First Natl. Bank Bldg., Huntington.

Theaters.

Ala., Huntsville. — Huntsville Enterprises Incptd.; \$27,500 capital; Chas. A. Crute, Gen. Mgr.; reconstruct Lyric Theater and adjoining building.

Fla., Jacksonville. — L. D. Joel, Liberty Theater; erect \$50,000 photoplay and vaudeville theater; seating capacity 700.

Ga., Madison. — Carl Zirbes, Washington, Ga.; erect moving-picture theater; 23x35-ft. balcony; inclined seats. Address Willis Irvin, Archt., Lamar Bldg., Augusta.

La., Monroe. — Saenger Amusement Co., J. E. Manning, Mgr.; expend \$75,000 to remodel and enlarge Monroe Opera House.

Md., Baltimore. — Druid Theater Co., 1515 Fidelity Bldg.; erect theater, Druid Hill Ave. and McCulloh St.; 64x171 ft.; 2 stories on front; reinforced concrete and marble; slag or composition roof; concrete floors; steam heat; indirect lighting; auditorium and semi-balcony to seat 1500; inclines instead of stairways; \$150,000; alternate plans provide dance hall on top, 64x75 ft.; \$50,000 to \$75,000 additional; Oliver B. Wight, Archt., Munsey Bldg.

Md., Baltimore. — Wilson Theater, Guy L. Wonder, Pres.; purchased Church of Messiah at Gay and Fayette Sts.; will convert present auditorium of Wilson Theater into foyer, change lobby, etc.; convert church auditorium into theater auditorium proper; seating capacity 2500; 85x150 ft.; fireproof; concrete, steel and slag roof; concrete and steel floors; steam heat; electric lights; E. G. Blanke, Archt., 213 N. Calvert St.

N. C., Statesville. — J. A. Knox; remodel Broadway Theater; 115x22.6 ft.; brick; tile roof; wood floors; round oak pipeless furnace, \$300. Address W. D. Van Derburgh, Mgr. (Lately noted.)

Tex., Pittsburg. — S. R. Greer and F. J. Phillips; erect 20-ft. extension to Crystal Theater.

Tex., Sherman. — Tom E. Harrison, Prop. Liberty Theater; expend \$25,000 to remodel 2-story brick building for vaudeville theater; fixtures, seats, etc.; main floor to seat 1000.

Va., Richmond. — Zink, Sparklin, Gondolf, Inc., Munsey Bldg., Washington; preparing plans for \$300,000 moving-picture theater; 100x160 ft.; fireproof; brick and concrete; metal sash; ready for bids Feb. 15.

W. Va., Beckley. — Frank Middelberg, Logan; erect \$75,000 motion-picture theater; 2 stories and attic; 50x140 ft.; brick; mill floor and roof construction; owner receives bids about Apr. 1; E. C. & E. A. Weber, Archts., Miller Bldg., Cincinnati, O. (Previously noted.)

Warehouses.

Ark., Fort Smith. — Western Grain Co.; erect \$25,000 warehouse.

Ark., Little Rock. — Robinson-Rodgers Co. Joppa Branch; erect 150x150-ft. fireproof warehouse in connection with 150x350-ft. mattress factory and excelsior plant; total cost \$200,000; Jno. P. Almand, Archt., Boyle Bldg.

Fla., Tampa. — Perkins & Sharpe; erect 2-story warehouse to replace burned structure; 105x105 ft.; reinforced concrete; outside walls hollow clay tile stuccoed; cement floors; tar and gravel roof; electric elevators; contract let about Feb. 9; B. C. Bonfoey, Archt. (Lately noted.)

Ky., Louisville. — A. A. Kaiser and associates; erect \$50,000 tobacco warehouse; brick.

Md., Baltimore. — T. I. Swartz, 24 Hopkins Place; erect warehouse, 22 Hopkins Place; 8 stories; sprinkler system; plans and specifications at office Benjamin Frank, Archt., 328 N. Charles St. Address owner.

Md., Relay. — Jones-Boardman Corp., J. C. Boardman, Pres., Fidelity Bldg., Baltimore; erect \$30,000 warehouse; 80x250 ft.; concrete

and frame; concrete and wood floors; composition roof; E. O. Taylor, Archt.-Engr.; construction by owner.

N. C., Asheville.—Geo. S. Powell and Edwin L. Ray; erect \$20,000 warehouse; 3 stories; concrete and steel.

N. C., Charlotte.—Swift & Co.; erect 42x118-ft. storage warehouse; frame; metal clad; \$5400.

S. C., Carhartt.—Hamilton Carhartt Cotton Mills, Rock Hill; erect 70-ft. addition to warehouse. (See Dwellings.)

S. C., Pamplico.—Farmers' Tobacco Warehouse Co.; erect 113x200-ft. brick warehouse; receiving bids; plans and specifications at office Pamplico Supply Co. after Feb. 1.

Tex., Dallas.—S. F. Browser & Co. of Texas;

erect warehouse; 30,000 to 40,000 sq. ft. floor space.

Tex., Fort Worth.—W. M. Cameron & Co.; erect \$25,000 to \$50,000 lumber sheds and warehouse to replace lately-noted burned structure; 50x1000 ft.; 2 stories; 2 sections and office; frame; concrete foundation; tar and gravel or overlap built-up asphalt roof.

Tex., Galveston.—Southern Products Co., Arthur L. S. Toombs, Agt.; contemplates extension to storage facilities.

Tex., Houston.—Japan Cotton Trading Co., H. Yamada and T. Yasui, representatives, Fort Worth; erect \$500,000 warehouse and compress.

W. Va., Charleston.—Eskew, Smith & Cannon Co.; erect \$100,000 warehouse; 6 stories; brick and concrete; 130x40ft.

Miscellaneous.

Md., Sparrows Point.—Locker Building.—Bethlehem Steel Co.; erect toilet and locker building; 1 story; 37x56 ft.; \$10,000; Hughes Foulrod Co., Contr., Commercial Trust Bldg., Philadelphia.

Schools.

Ark., Jonesboro.—State Board of Agriculture, Little Rock; erect \$40,000 engineering building; 22x50 ft.; 3 stories; brick; composition shingle roof; concrete and wood floors; interior tile; plaster board; wire glass; heating and lighting connected with central plant; 2-ton freight elevator; F. M. Blaisdell, Archt., Little Rock; V. C. Kays, Contr. (Lately noted.)

N. C., Roanoke Rapids.—Board of Education; erect 3-story and basement Junior-Senior High School; 67x210 ft.; auditorium, 76x111 ft., to seat 2000; stage, 27x74 ft.; semi-fireproof; brick; limestone trim; slate and slag roof; wood floors; steam heat; electric lights; Gothic tower, 40 ft. square extending above main roof; 24 classrooms; music conservatory; boiler plant and gymnasium, 48x74 ft., with running track in basement; swimming pool, 20x58 ft.; contracts let for mill-work, roofing, sheet-metal work and electrical work; taking bids on stone work, steel sash, glass and plumbing; bids addressed to Robt. B. Upjohn, Archt., Room 108, Banner Bldg., Greensboro, N. C.; plans, specifications and information from Archts.; Aaron G. Alexander, Local Mgr. (Lately noted.)

Okla., Okmulgee.—Board of Education, R. W. Adkinson, Clk.; erect \$175,000 vocational school; 3 stories and basement; 182x116 ft.; brick; stone trim; composition roof; Smith, Rea, Lovitt & Senter, Archts., Parkinson Bldg.

Okla., Stillwater.—State Board of Agriculture, J. A. Whitehurst, Pres., State Capital, Oklahoma City; erect \$20,000 dairy barn on farm of Oklahoma Agricultural and Mechanical College; 1 story; F. W. Redlich, Archt., care Architectural Dept., A. & M. College; Kreipke-Schafer Construction Co., Contr., Lawrence Hotel, Oklahoma City. (Previously noted.)

Tex., Hallettsville.—Hallettsville Independent School Dist.; erect \$60,415 building; 1 story; 12 rooms and auditorium; reinforced concrete and brick; R. Smith, Contr., Austin. (Previously noted.)

Stores.

Ala., Huntsville.—F. W. Woolworth Co., New York; reconstruct Chapman Bldg.; 2 stories and basement; W. R. Gunn, Contr.

Fla., Jacksonville.—Groover & Co., 119 Laura St.; expend \$6000 to remodel building; O. P. Woodcock, Contr.

Fla., Tampa.—Tampa Morning Tribune Co.; erect 7-story building; 65x105 ft.; reinforced concrete, press brick, hollow fireproof tile and tile curtain walls; inside partitions gypsum block tile; interior tile; wire glass; Johns-Manville Standard built-up roof; composition concrete and tile floors; gas heat (contract not let for heaters); Otis elevator, \$10,000; B. C. Bonfoey, Archt., Petteway Bldg.; C. F. Aulick, Contr.

Ga., Atlanta.—Securities Sales Co.; alterations to building, 63 N. Broad St.; brick; \$15,000; contracts let; Morgan & Dillon, Archts., Grant Bldg.; contracts let. (Lately noted.)

Ga., Atlanta.—George Muse Clothing Co.; erect \$500,000 building; 42x158x40 ft.; 3 entrances; 7 stories and basement; limestone, steel, hollow tile, concrete and pressed brick; 200 ft. of show windows; 1st story 25 ft. high,

BUILDING CONTRACTS AWARDED

Apartment-Houses.

W. Va., Charleston.—H. S. Stern; erect apartment building; 4 suites, 5 rooms each; contract let.

W. Va., Huntington.—F. A. Gartlein; erect \$18,000 apartment-house; 36x60 ft.; 3 stories; brick and hollow tile; slate roof; oak and pine floors; Lester D. Harer, Archt.; C. W. Harer, Contr., 1029 Euclid Pl. (Lately noted.)

Churches.

N. C., Greensboro.—Apostolic Holiness Church, Rev. W. R. Cox, Pastor; erect \$25,000 building; brick and concrete; fireproof; 2 main auditoriums; seat 1000; gallery and basement; M. L. Albertson, Archt.; J. L. Crouse, Contr.

Dwellings.

Ark., Little Rock.—Q. L. Porter; \$12,000 alterations to residence; Herman & McCain Construction Co., Contr.

D. C., Washington.—Preston B. Samuels; erect \$10,000 residence, 3925 Livingston St.; 2 stories; 31x35 ft.; W. R. Coons, Contr., 2414 Irving St.

Fla., Jacksonville.—A. S. Beville; erect \$5750 residence; frame; 28x40 ft.; asphalt slate shingle roof; wood floors; grate and gas heat; electric lights; Guy Farwell, Archt.; O. L. Clayton, Contr., 21 Blum Bldg. (Lately noted.)

Ga., Valdosta.—Mrs. W. S. West and J. R. Dasher; erect 13 dwellings; 5 and 6 rooms each; J. J. Newman, Contr.

Ga., Valdosta.—D. W. Plowden; erect 7 dwellings; 5 and 6 rooms; J. J. Newman, Contr.

Mo., Kansas City.—L. B. Simpson; erect residence; 2 stories and basement; 29x31 ft.; frame and shingle; Joe Gier, Contr., 108 E. 34th St.

N. C., Newbern.—Newbern Construction Co., organized by C. L. Ives and others to erect dwellings; frame; composition roof; wood floors; Elijah Taylor, Contr.

Okla., Okmulgee.—C. H. Deltrich; erect \$10,000 residence; 1 story; 40x68 ft.; frame and stucco; Smith, Rea, Lovitt & Senter, Archts., Parkinson Bldg.; G. E. Gunn, Contr.

Va., Cape Charles.—Harvey W. Belote; erect \$15,000 residence; 2 stories; 28x32 ft.; Diehl & Vance, Archts., Virginia-Carolina Bldg., Norfolk; C. H. Legg, Contr.

Va., Clarendon.—Percy Oliver, 505 Evans Bldg.; erect several bungalows; 1½ story and basement; 28x32 ft.; W. E. Mooney, Contr., Evans Bldg.; both Washington, D. C.

Va., Greenwood.—M. R. Ellis, Waynesboro, Va.; reported to have contract to erect \$100,000 residence; 2 stories; 75x30 ft.

Va., Newport News.—Kass & Berger; erect 11 dwellings; 20x28 ft.; 2 stories; frame; interior steel lath and plaster; asphalt shingle roof; wood floors; electric lights; F. A. Lord Construction Co., Contr., 234 25th St.

Va., Norfolk.—Griffin Bros., Arcade Bldg., Contrs. for \$14,000 residence, Lockhaven; 2 stories; 38x32 ft.

W. Va., Huntington.—J. J. Stander; erect 3 dwellings; 2 stories and basement; 24x36 ft.; brick; J. West, Contr., 611 9th St.

W. Va., Huntington.—J. R. McMahon; erect \$20,000 residence; 40x60 ft.; brick and hollow tile; tile roof; joist floor construction; oak finish; William Francis Diehl, Archt.; C. W. Harer, Contr., 1029 Euclid Pl. (Lately noted.)

W. Va., Madison.—H. M. Pelphrey; erect \$6000 residence; 2 stories and basement; 28x32 ft.; brick; J. J. West, Contr., 611 9th St., Huntington.

Government and State.

Miss., Charleston.—Postoffice.—J. W. Ashcraft; erect \$6000 building for postoffice; 26x72 ft.; brick; 5-ply Carey roof; cement floor; heating not decided; metal ceilings; R. H. Byrd & Co., Archts. and Contrs.

Hospitals, Sanitariums, Etc.

N. C., Charlotte.—Charlotte Sanitarium, Dr. J. P. Munroe, Mgr.; erect \$40,000 additional wing connected by 10x30-ft. solarium; 24 rooms; 3 stories and basement; 40x50 ft.; 8 rooms; 4 baths each floor; enlarge X-ray department; lecture hall, dining-room, showers, storage, etc., in basement; tar and gravel roof; wood floors; steam heat; also erect nurses' home; L. L. Hunter, Archt.; R. L. Goode, Contr.

Hotels.

Fla., Miami.—Carl G. Fisher; erect Hotel Flamingo at Miami Beach; 200 rooms and baths; central tower, 11 stories high with 12 rooms on each floor; reinforced concrete; fireproof; construct pier, etc.; \$1,000,000; Rubush & Hunter, Archts., Indianapolis, Ind.; C. B. Floyd, Miami Beach, Contr. in charge of construction. (Previously noted.)

Miss., Charleston.—Lamb-Fiske Lumber Co.; erect dining-room to Ladisco Hotel; 40x48 ft.; frame and stucco; 5-ply built-up Carey roof; hardwood floors; steam heat; W. R. Spencer, Archt., Memphis, Tenn.; R. H. Byrd & Co., Contrs., Charleston.

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to contain mezzanine floor; all floors above 1st finished in mahogany with 14-ft. ceilings; 55,000 sq. ft. floor space; Hentz, Reid & Adler, Archts.; A. J. Krebs Co., Contr. (Previously noted.)

Ky., Ashland.—Kent Pritchard; erect \$12,000 building; 2 stories and basement; 24x135 ft.; brick; wood floors; composition roof; plate glass and prism front; combination electric elevator; J. W. King, Archt., Gaylord Bldg.; Ellswick & Ramey, Contrs. (Previously noted.)

Ky., Ashland.—H. M. Hudleson; erect \$20,000 store and apartment; 2 stories and basement; 28x93 ft.; brick; J. W. King, Archt., Gaylord Bldg.; Chas. Simpson, Contr.

Ky., Ashland.—J. H. McCleary, Broadway and Winchester St.; erect \$40,000 addition to building; 2 stories and basement; 25x130 ft.; brick; Ellswick & Ramey, Contrs.; J. W. King, Archt., Gaylord Bldg.

La., Lake Charles.—Frank Realty Co.; remodel Frank Bldg. for department store and 15 business offices; install plate-glass, marble front; provide arcade, etc.; \$23,000; Phillips & McCook, Archts.; W. J. Quick, Contr.

Mo., Kansas City.—Mutual Drug Co., Cleveland, O.; erect \$100,000 business building; 4 stories and basement; 50x115 ft.; fireproof; reinforced concrete and brick; composition roof; H. C. Sunderland, Archt., Interstate Bldg.; Harvey Silver, Contr., Shukert Bldg. (Lately noted.)

N. C., Burlington.—Williamson, Inc.; erect \$100,000 grocery building and garage; 53x260 ft.; 3 stories; reinforced concrete; steam heat; Southern Cotton Oil Co.'s roofing; L. L. Hunter, Archt.; R. L. Goode, Contr.; both Charlotte.

Okla., Duncan.—Management O'Neill Bldg.; expend \$5000 to remodel building; L. H. Haas, Contr.

S. C., Greenville.—C. O. Hobbs; erect 1-story-and-basement addition to 2-story building; brick and hollow tile; gravel roof;

maple floors; steam heat; electric lights; passenger elevator; \$50,000; Martin & Ward, Archts.; W. M. Jordan, Contr. (Lately noted.)

Tex., Marshall.—Davidson Blalock; erect 5 store buildings; 56x90 ft.; brick; composition roof; concrete floors; C. G. Lancaster, Archt.; Frank Moos, Contr. (Lately noted.)

Tex., Sinton.—W. C. Sparks and C. S. Vermillion; erect 2 store buildings; 25x80 ft. and 25x100 ft.; hollow tile; brick front and trimmings; Berckner & Forgy, Contrs.

Va., Norfolk.—Smothers Drug Co., 1452 W. 38th St.; erect store and apartment building; 2 stories; 64x62 ft.; brick; \$30,000; Wickham C. Taylor, Archt., Citizens' Bank Bldg.; W. Joe Atkinson, Contr., 714 31st St. (Previously noted.)

Va., Norfolk.—T. S. Southgate, Prest., Southgate Terminal Corp.; alter and erect addition to store and apartment building, 19th and Granby Sts.; 1 and 2 stories; \$10,000; Wickham C. Taylor, Archt., Citizens' Bank Bldg.; W. Joe Atkinson, Contr., 714 31st St.

Va., Norfolk.—Griffin Bros., Arcade Bldg., Contrs., to erect 4 stories; 1 story; 80x60 ft.; \$20,000.

W. Va., Huntington.—J. H. Holswade, 918 3d St.; erect \$20,000 building; 3 stories and basement; 29x43 ft.; Clell Smith, Contr. (Previously noted.)

W. Va., Huntington.—Anderson-Newcomb, A. O. Anderson, Prest.; erect 2-story and basement addition to department store; 60x160 ft.; \$75,000; Wm. F. Diehl, Archt., R. & P. Bldg.; J. W. Bell, Contr., 4th Ave. (Previously noted.)

Theaters.

Okla., Muskogee.—Dan Myers; expend \$40,000 to \$50,000 to remodel Hinton Theater; 60x175 ft.; brick, stone, concrete and frame; composition roof; concrete floors; interior tile; metal ceilings; steam heat; ventilators; 20 French windows; stationary awning over

front to contain 300 electric lights. Address Dickmann & Niemann, Archts. and Contrs., Barnes Bldg. (Lately noted.)

Okla., Oklahoma City.—United Theater Co., care J. H. Cooper; erect \$250,000 theater; 2 stories; 75x140 ft.; brick and steel; reinforced concrete floors; concrete foundation; day labor; steel contract, St. Joseph Structural Steel Co., St. Joseph, Mo.; Carl Bolter & Bro., Archts., Ridge Bldg., Kansas City, Mo. (Previously noted.)

Warehouses.

Ark., Little Rock.—Buchanan & Jung; erect 1-story warehouse; 70x140 ft.; brick; \$28,000; Jno. P. Almand, Archt., Boyle Bldg.; Wm. Peterson, Contr. (Lately noted.)

La., Shreveport.—Interstate Electric Co.; erect \$25,000 warehouse; 1 story; brick; 60x150 ft.; W. H. Werner, Contr.

Mo., Kansas City.—A. B. C. Fireproof Warehouse Co.; erect \$100,000 warehouse; 6 stories and basement; 62x100 ft.; brick; stone trim; composition roof; Smith, Rea & Lovitt, Archts., Finance Bldg.; Vansant Construction Co., Contr., Dwight Bldg. (Lately noted.)

Tenn., Chattanooga.—Thatcher Spinning Co.; build 4-story warehouse; reinforced concrete; Turner Construction Co., Contr., 242 Madison Ave., New York.

Tenn., Memphis.—Mr. Grenshaw, Iowa and Kentucky Sts.; erect \$25,000 warehouse; 6x100 ft.; brick and concrete; Fisher roofing; wood and concrete floors; metal doors; G. M. Shaw & Co., Archts.; Joe Bloomfield, Contr., Builders' Exchange. (Chickashaw Candy Co., lately noted to erect building.)

Tex., Sherman.—Hardwicke-Etter Hardware Co.; erect \$15,000 extension to warehouse; 2 stories; brick; J. A. Simmons, Contr.

Va., Danville.—Piedmont Hardware Co.; erect \$70,000 storage warehouse; 4 stories; fireproof; steel and concrete; John P. Pettyjohn & Co., Contrs., Lynchburg. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Aluminum (Sheet).—See Presses, etc.

Bagging, etc.—Freeman-Moore Co., Bennettsville, S. C.—Names and addresses bagging and tie mfrs.

Bank Fixtures.—Tradesmen's Bank, Frank J. Wilkoff, Prest., Oklahoma City, Okla.—Prices on safe, vault equipment, etc.

Boiler.—Lock Box 41, Phillipsburg, N. J.—500 to 600 H. P. Stirling B. & W. boiler; 150 lbs. steam; second-hand.

Boiler.—Sumter Stemmy Co., E. I. Reardon, Secy., Sumter, S. C.—Data and prices on boilers for tobacco stemmy.

Boiler.—John G. Duncan Co., Jackson and Central Sts., Knoxville, Tenn.—100 H. P. standard return-tubular boiler; second-hand; 100 lbs. working pressure; immediate delivery.

Boiler.—Elizabeththn Flooring Co., Elizabethton, Tenn.—Second-hand 150 H. P. steel-encased boiler, complete with stack and fittings; insurance not less than 125 lbs. pressure; state price and location.

Boiler.—J. C. Steele & Sons, Statesville, N. C.—80 H. P. return-tubular boiler without stack; new or first-class second-hand.

Boiler.—E. I. Reardon, Box 603, Sumter, S. C.—120 H. P. steam boiler.

Boilers.—See Contractors' Equipment.

Boilers, etc.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until Feb. 11 to furnish: Steam boilers; scrap-cutting shear; spiral riveted pip-

ing; copper cable; brass; bronze; copper; lead; zinc; copper pipe and tubing; brass tubing; porthole glasses; boat hooks; marine lights; door locks; grass furniture; buck towels; pens; carbon paper; bristle board; oxalic acid, turpentine, etc. Blank forms and information (Circular 1337) on application to offices of: Panama Canal; Asst. Purchasing Agents at 24 State St., New York; 606 Common St., New Orleans; Fort Mason, San Francisco; United States Engr. offices throughout country.

Bottling Machinery.—Vervo Products Co., J. F. Hunter, Mgr., Orangeburg, S. C.—Bottling mch.

Bottling Machinery.—Duck River Milling Co., H. S. O'Connor, Mgr., Centerville, Tenn. Bids until Mch. 1 for bottling plant.

Box Machinery.—Southern Wood Products Co., 74 St. Louis St., Mobile, Ala.—Mchy. to mfr. boxes, box shooks and case oil boxes.

Boxes (Paper).—See Presses, etc.

Boxes (Paper).—Vervo Products Co., J. F. Hunter, Mgr., Orangeburg, S. C.—Paper shipping boxes.

Boxes.—Mexican Consul-General, New Orleans, La.—Names and addresses mfrs. paper and wooden boxes.

Braider Machines.—B. A. Morgan, Greenville, S. C.—Names and addresses mfrs. braider machines.

Brass (Sheet).—See Presses, etc.

Bridges.—Will S. Robinson & Bro., Laurel

Bloomery, Tenn.—Iron bridges, bridge materials; "T" beams.

Bridge Construction.—Limestone County, J. E. Bradley, County Judge, Groesbeck, Tex. Bids until Jan. 29; bridge over Navasota River; 88,000 lbs. structural steel; plans, etc. with Fred P. Holt, Engr., Mexia, Tex., and State Highway Dept., State Office Bldg., Austin, Tex.

Bridge Construction.—Pulaski County Commissioners, Broadway-Main Street Bridge Dist., Justin Matthews, Secy., Southern Trust Bldg., Little Rock, Ark.—Bids until Mch. 2; 2 reinforced concrete arch bridges across Arkansas River at Main and Broadway Sts.; 18 reinforced arch spans with roadway 46 ft. wide; 1700 lin. ft. approaches; 61,500 cu. yds. concrete; 3,300,000 lbs. reinforcing steel; sidewalks; plans, etc., for Main Street bridge with Luton, Roberts & Titus, Consult. Engrs., Indianapolis, Ind., and for Broadway Street bridge with Hedrick & Hedrick, Consult. Engrs., 506 Interstate Bldg., Kansas City, Mo.

Building Material.—Huntsville Daily Times, J. E. Pierce, Editor and Gen. Mgr., Huntsville, Ala.—Prices on structural steel, tile, brick, cement, stone, elevators, window roofing, etc., for 10-story building, 80x153 ft.

Building Materials.—A. A. Jones, Lake Worth, Fla.—To correspond with mfrs. of glass, sash, iron material, etc., for building factories.

Building Materials.—Elkner-Henry Motor Sales Co., C. C. Henry, Altus, Okla.—Prices

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on building materials for 2-story 75x140-ft. brick and reinforced concrete building.

Building Material.—Bank of Chiefland, O. N. Harper, Prest., Chiefland, Fla.—Prices on building material for 1-story concrete and brick building 30x40 ft.

Calcinators.—Zwixite Corp., R. L. Montague, People's Office Bldg., Charleston, S. C. Names and addresses mfrs. calcinators.

Cardboard.—See Presses, etc.

Cars.—Lillington Brick Co., Geo. M. Norwood, Gen. Mgr., Goldsboro, N. C.—Data and prices on 350 standard size single-deck dryer cars.

Canning Machinery.—Leslie D. Fairchild, Mgr. Exchange Hotel, Montgomery, Ala.—Prices on mchy. to can vegetables.

Canning Machinery.—Karsten Implement Co., 462 Broadway, Macon, Ga.—Names and addresses mfrs. canning mchy.

Celluloid (Sheet).—See Presses, etc.

Coffee Mills.—See Roasters, etc.

Contractors' Machinery.—Maryland Equipment & Supply Co., Equitable Bldg., Baltimore, Md.—200 H. P. H. R. T. boiler, 125 lbs. pressure; 50 or 60 H. P. boiler, locomotive or vertical; No. 5 Champion crusher; 50-ft. stone elevator with 24-in. width buckets; 15-ton 8-wheel bucket-handling 45-ft. boom locomotive crane; ¾-yd. clam-shell bucket; No. 7½ or 8 gyratory head suspended crusher; No. 6 gyratory head suspended crusher; 11x16 four-driver saddle-tank standard gauge locomotive; 2 Vulcan 13x18 standard gauge four-driver saddle-tank locomotives; No. 0 Austin gasoline-driven trench machine; Buffalo Pitts 10-ton 3-wheel road roller.

Conveyor.—R. H. Hunt Co., Southwestern Life Bldg., Dallas, Tex.—Rope conveyor; 1200 to 1500 ft.; convey gravel from river island to building site.

Cone (Ice Cream) Machines.—J. M. Cobb, Dawson, Ga.—Names and addresses mfrs. of ice-cream cone machines.

Conveyor Chain.—W. H. Moore Lumber Co., W. H. Moore, Prest., 625 Central Ave., Hot Springs, Ark.—Conveyor chain.

Corn Mill.—Duck River Milling Co., H. S. O'Connor, Mgr., Centerville, Tenn.—Bids until Mch. 1 for 100-bu. corn mill.

Cotton Machinery.—See Textile Machinery.
Drainage System.—Tallahassee Drainage Dist., Winston County, W. E. Bennett, Secy., Louisville, Miss.—Bids until Feb. 7; construct 17.74 mi. main canal and 4 laterals; 821,090.8 cu. yds. earth excavation; clear 210.4 acres right of way; F. A. Livingston, Engr.

Crushing Machinery.—Mexican Consul-General, New Orleans, La.—Names and addresses mfrs. machinery for crushing fruits.

Crushers.—See Contractors' Equipment.

Crusher.—Lock Box 41, Phillipsburg, N. J. No. 6 or 7½ gyratory crusher.

Electrical Equipment.—Chowan Railway & Power Co., Murfreesboro, N. C.—Prices on electrical equipment, including high-power transmission lines; for railway, Orlando, N. C., to Franklin, Va.

Electrical Equipment.—George W. Smith, R. D. No. 3, Anderson, S. C.—Names and addresses mfrs. A. C. electrical equipment, generating 25 to 40 H. P.; consider second-hand.

Electrical Instruments.—See Wire, etc.

Electrical Supplies.—See Tractor Works Machinery.

Elevators.—See Building Material.

Engine.—Arctic Ice & Coal Co., Winston-Salem, N. C.—35 H. P. 250 R. P. M. steam engine; new or second-hand.

Curbing.—Chatham County Commrs., Savannah, Ga.—Bids until Feb. 12; 20,000 lin. ft. straight curbing in 5-ft. minimum lengths;

572 lin. ft. circular curbing, 7-ft. radius, pieces 5 ft. 6 in. long; 37½ ft. circular curbing, 3-ft. radius, pieces 4 ft. 8½ in. long; plans, etc., on file and with County Engr.

Cutters (Paper).—See Presses, etc.

Elevators.—Sumter Stemmy Co., E. I. Reardon, Secy., Sumter, S. C.—Data and prices on elevators for tobacco stemmy.

Elevator.—E. I. Reardon, Box 603, Sumter, S. C.—Electric freight elevator with platform 8x10 ft.; travel 40 ft. per minute.

Engine.—See Generator.

Engine.—W. A. Perrow, Concord Depot, Va.—Oil or gasoline engine on trucks; with or without saw attachment.

Engine.—Lillington Brick Co., Geo. M. Norwood, Gen. Mgr., Goldsboro, N. C.—Data and prices on 150 H. P. new or second-hand steam engine.

Engine.—W. H. Moore Lumber Co., Prest., 625 Central Ave., Hot Springs, Ark.—75 H. P. engine.

Engine.—City of Sweet Springs, Mo., J. J. Smith, Mayor.—140 to 200 H. P. Diesel or semi-Diesel crude oil engine. (Lately noted under Sweet Water.)

Excavator.—Wm. B. Grimshaw Co., Drexel Bldg., Philadelphia, Pa.—Bucyrus class 14 or 26 dragline excavator; shipment to Pennsylvania.

Flour Mill.—Duck River Milling Co., H. S. O'Connor, Mgr., Centerville, Tenn.—Bids until Mar. 1 for 20-bbl. flour mill.

Gasoline Apparatus.—Northwestern Oil Equipment Corp., 2 N. 10th St., Minneapolis, Minn.—To represent mfrs. of gasoline-dispensing apparatus.

Generator.—City of Sweet Springs, Mo., J. J. Smith, Mayor.—A. C. 60-cycle 2300-volt generator. (Lately noted under Sweet Water.)

Generator.—Town of Stroud, Okla., W. A. Hadley, Mayor.—New or second-hand 100, 125 or 150 K. W. generator connected to gas or oil engine having H. P. to drive.

Grinders.—See Roasters, etc.

Grist Mill Equipment.—J. R. Cox, Walters, Va.—Grist mill mchy.

Heater.—Appalachian Marble Co., Knoxville Tenn.—Cochrane water heater, open type, used with 150 H. P. horizontal boiler, 150 lbs. steam.

Heating Plant.—A. L. Christenberry, Southwest National Bank Bldg., Oklahoma City, Okla.—Bids until Feb. 16 for hot-water heating plant for residence.

Heating Plant.—Tradesmen's Bank, Frank J. Wikoff, Prest., Oklahoma City, Okla.—Prices on heating plant for 10-story building, 60x90 ft.

Hoist.—Supt. of Construction, Washington and Lee University, Lexington, Va.—Rent or buy second-hand steam hoist, 1 to 1½-ton capacity; complete excepting boiler.

Ice Plants.—Town of Stroud, Okla., W. A. Hadley, Mayor.—Prices on 6 to 10-ton raw and distilled water ice plants; new or second-hand.

Ice Plant.—Duck River Milling Co., H. S. O'Connor, Mgr., Centerville, Tenn.—Bids until Mch. 1 for 5-ton ice plant.

Knitting Machinery.—See Textile Machinery.

Labeling Machinery, etc.—Velvo Products Co., J. F. Hunter, Mgr., Orangeburg, S. C.—Labeling mchy., labels, cartons.

Locomotive.—Pennsylvania Equipment Co., 1420 Chestnut St., Philadelphia, Pa.—Saddle-tank switching locomotive, 19x24 cylinders, drivers 46 or 48 in., 30,000 lbs. tractive power.

Locomotives.—See Contractors' Equipment.

Machine Tools.—See Tractor Works Machinery.

Machine Tools.—J. C. Hardin & Co., J. C. Hardin, Rock Hill, S. C.—Machine tools, including planer, shaper, moulder.

Metal Tubing.—Jas. B. Easton, 627 W. Fayette St., Baltimore, Md.—Metal tubing, 7-16-in. inside measurement, 6 in. long.

Metal-working Machinery.—Lookout Boiler & Mfg. Co., Chattanooga, Tenn.—Mchy. to mfr. boilers, tanks, towers, plate and sheet metal work.

Mixer.—P. O. Box 269, Norfolk, Va.—Second-hand ½-yd. concrete mixer, gasoline driven; price and location.

Motor.—D. W. Stewart Cigar Co., D. W. Stewart, Prest. and Gen. Mgr., Bennettsville, S. C.—Prices on 1 H. P. single-phase 60-cycle 110-volt standard electric motor.

Motors.—Northwestern Oil Equipment Corp., 2 N. 10th St., Minneapolis, Minn.—To represent mfrs. of electric motors.

Overalls Equipment.—B. W. Simon, Secy. Farmers' Trust Co., Albany, Ga.—Data and prices on overalls mchy.

Paving Wall.—Chatham County Commrs., Savannah, Ga.—Bids until Feb. 12; retaining wall along Ogeechee road; plans, etc., on file and with County Engr.

Paving.—City, E. M. Fry, City Mgr., McAlester, Okla.—Bids about Feb. 15; 2 to 5 blocks paving on Cherokee Ave.; brick; G. M. Brown, Engr.

Paving.—City of Parkersburg, W. Va., J. Loyal Gilbert, Mayor.—Bids in Feb.; pave streets; concrete; brick on concrete base; asphalt on concrete base; \$200,000.

Paving.—City, H. A. Peacock, Mayor, Albany, Ga.—Bids until Feb. 5; 16 blocks street; concrete; asphaltic concrete; sheet asphalt; vitrified brick; Willite; \$162,000 available; R. J. Edgerly, Engr.

Paving.—Lowndes County Commrs. Roads and Revenues, L. M. Stanfill, Chrmn., Valdosta, Ga.—Bids until Feb. 24; 4.89 mi. hard-surfaced road between Valdosta and Mineola on National Highway; 45,940 sq. yds. pavement, penetration asphalt macadam, asphalt macadam (Finley method), Kentucky rock asphalt, asphaltic concrete, cement concrete, bituminous pavement (Willite method); 9397 cu. yds. excavation; plans, etc., on file at Valdosta; State Highway Dept., Walton Bldg., Atlanta, Ga., and with Klyce & Kackley, Project Engrs., Fourth and First National Bank Bldg., Nashville, Tenn.

Paving Material.—Virginia State Highway Commn., G. P. Coleman, Commr., Richmond, Va.—Bids until Feb. 3; 681,700 gals. bituminous material delivered at points in State; 218,000 gals. cold-patch bituminous material in tank cars; alternate, 218,000 gals. cold-patch bituminous material in metal drums; alternate, 218,000 gals. cold-patch bituminous material in wood barrels.

Piping.—English Drilling & Producing Co., 413 Grain Exchange Bldg., Oklahoma City, Okla.—2400 ft. 23½-lb. upset ends drilling pipe for rotary; 3 mi. 2-in. line pipe; 3000 ft. 28 or 32-lb. 8½ casing.

Piping, etc.—T. J. Lane Equipment Co., W. Main St. and Big Four R. R., Springfield, O. 15,000 ft. 1½-in. extra strong black pipe with thread and couplings; 20-ft. lengths; new or used.

Pipe (Water).—City of Asheville, N. C.—Bids until Feb. 12; furnish 3263 tons 16-in. bell and spigot C. I. pipe, 21.3 tons special castings, 51,300 lin. ft. 16-in. C. I. pipe; 58 16-in. tees and bends; f. o. b. Asheville; also for laying above 16-in. pipe and specials; f. o. b. Baltimore, Axalea or Swannanoa stations, city furnishing same to contractors; plans, etc., from B. M. Lee, City Engr.

Power Plant (Electric).—W. R. Gater, City Mgr., Norman, Okla.—Data on complete power plant and distribution system.

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Press.—Sumter Stemmary Co., E. I. Reardon, Secy., Sumter, S. C.—Data and prices on presses for tobacco stemmary.

Presses.—White Furniture Co., Mebane, N. C.—Hydraulic glue presses.

Presses.—E. I. Reardon, Box 603, Sumter, S. C.—1 or 2 hydraulic presses to compress leaf tobacco.

Presses, etc.—O. I. C. Mfg. Co., S. T. McClaren, Prest.-Mgr., St. Petersburg, Fla.—Foot stamping presses, paper cutters and cutting dies, cardboard, sheet celluloid, sheet brass and aluminum, eyelets, photo-engravings, paper boxes and crates.

Pulverizer.—Paul B. Popp, Altenburg, Mo. Limestone pulverizer.

Pulverizer.—Breverville Community, A. J. Pouyer, R. F. D. No. 5, Perryville, Mo.—Limestone pulverizer.

Pulverizer.—Highland Community, P. H. Brewer, Prest., R. F. D. No. 1, Perryville, Mo.—Limestone pulverizer.

Pulverizer.—Superior Limestone Co., J. B. Harvey, Batesville, Ark.—Pulverizer for limestone.

Pump.—Aretic Ice & Coal Co., Winston-Salem, N. C.—Belt-driven power pump, capacity 500 gals. per minute; new or second-hand.

Pumping Equipment.—W. A. Perrow, Concord Depot, Va.—Deep-well pumping equipment for farm and dwelling; hand or power.

Punch Boards.—G. S. Moore, P. O. Box 1, Gadsden, Ala.—Names and addresses mfrs. punch boards.

Rails.—W. H. Moore Lumber Co., W. H. Moore, Prest., 625 Central Ave., Hot Springs, Ark.—1 mi. 56-lb. relaying rails.

Rails.—Lillington Brick Co., Geo. M. Norwood, Gen. Mgr., Goldsboro, N. C.—Data and prices on 12 and 16-lb. rail, 15 to 20 tons each.

Rails.—Liberty Brick Co., J. H. Johnson, Mgr., Liberty, N. C.—15 to 20-ton 12-lb. rails with splice plates and spikes for drying sheds; new or second-hand.

Rails.—Chowan Railway & Power Co., Murfreesboro, N. C.—Prices on rails for electrical railway, Orlando, N. C., to Franklin, Va.

Road Construction.—State Highway Dept., Bell Bldg., Montgomery, Ala.—Bids until Feb. 24; 4 mi. State trunk road No. 29 between Camp McClellan and Jacksonville; 5417 cu. yds. water-bound macadam; 37,688 sq. yds. bituminous surface; 16,723 lbs. reinforcing steel; plans, etc., on file at State Highway Dept., W. S. Keller, Engr., Montgomery, Ala.

Road Construction.—Kimble County, C. S. Stevenson, Judge, Junction, Tex.—Bids about Feb. 9; 35 mi. road; gravel; \$250,000 available; W. E. Simpson, Engr.

Road Construction.—Hill County Comms., R. T. Burns, County Judge, Hillsboro, Tex.—Bids until Jan. 31; 7 mi. Hillsboro-Cleburne road in Dist. No. 1; 13,037 cu. yds. gravel surfacing; 496 cu. yds. concrete; 50,400 cu. yds. borrow; 13,037 cu. yds. earth excavation; 10 mi. Hillsboro-Mexia road in Dist. No. 3; 18,200 cu. yds. gravel surfacing; 84,000 cu. yds. borrow; 18,000 cu. yds. excavation; plans, etc., with Bryant & Huffman, Civil Engrs., Hillsboro, and 211-17 Littlefield Bldg., Austin, Tex.

Road Construction.—Sunflower County Highway Comms., Dist. No. 1, John W. Johnson, Clerk, Indianola, Miss.—Bids until Feb. 2; gravel 20 mi. highway; plans, etc., with John M. Harbert Engineering Co., Engr.

Road Construction.—Scurry County, W. S. Adamson, County Judge, Snyder, Tex.—Bids until Feb. 11; changed date from Jan. 12; 21 mi. road from Snyder to Scurry-Mitchell-Noland County line; Federal-aid Project 111;

\$100,000 available; Henry Exall Elrod Engineering Co., Engr., Dallas, Tex.

Road Construction.—Navarro County, H. E. Traylor, County Judge, Corsicana, Tex.—Bids until Feb. 2; improve Corsicana-Rice road; 158,762.6 cu. yds. gravel; 3516.49 cu. yds. concrete; 7680 cu. yds. rip-rap; 404,285 lbs. reinforcing steel; 13,312 lin. ft. concrete piling; plans, etc., with County Engr., Corsicana, and State Highway Dept., Capitol Bldg., Austin, Tex.

Road Construction.—Parker County Commissioners, E. A. Swofford, County Judge, Weatherford, Tex.—15.1 mi. State Highway No. 1; 141,083.3 cu. yds. gravel; 115,704.9 cu. yds. excavation; 90,825 lbs. reinforcing steel; bids opened Jan. 26; plans, etc., with O. Leonard, County Engr., Weatherford, and State Highway Dept., Austin, Tex.

Road Construction.—Flagler County Commissioners, Geo. Moody, Chrmn., Bunnell, Fla.—Bids until Feb. 9; 40 mi. roads in Haw Creek Special Road and Bridge Dist.; 50,000 cu. yds. coquina rock; 700 ft. bridges; plans, etc., with S. C. Stallings, County Engr.

Road Construction.—Laurens County Commissioners, Laurens, S. C.—Bids until Feb. 6; 14.131 mi. top-soil road on Piedmont highway between Laurens and Fountain Inn; 40,539 cu. yds. top-soil; 1976 lbs. steel reinforcement; 55,621 cu. yds. excavation; plans, etc., on file at Laurens, and with J. Roy Pennell, State Highway Engr., Columbia, S. C.

Road Construction.—Hill County Comms., R. T. Burns, County Judge, Hillsboro, Tex.—Bids until Jan. 31; 11.75 mi. highway on Hillsboro-Waco road, State Highway No. 6; gravel; 27,875 cu. yds. gravel surfacing; 89,827 cu. yds. earth excavation; 78,000 lbs. reinforcing steel; plans, etc., with Bryant & Huffman, Civil Engrs., Hillsboro, and 211-17 Littlefield Bldg., Austin, Tex., and State Highway Dept., Austin, Tex.

Road Construction.—Limestone County, J. E. Bradley, County Judge, Groesbeck, Tex.—Bids until Jan. 29; 11.917 mi. State Highway No. 14; 28,329 mi. State Highway No. 7; 250,500 cu. yds. gravel; 240,000 cu. yds. rock; 200,000 cu. yds. borrow; 39,200 cu. yds. excavation; 279,000 lbs. reinforcing steel; 88,000 lbs. structural steel; plans, etc., with Fred P. Holt, Engr., Mexia, Tex., and State Highway Dept., State Office Bldg., Austin, Tex.

Road Machinery.—See Contractors' Equipment.

Road Roller.—Charles B. Metcalfe & Son, Contrs., San Angelo, Tex.—10-ton gasoline or oil-burning road roller.

Roasters, etc.—Mrs. Rose C. Crills, P. O. Box 535, Ranger, Tex.—Names and addresses mfrs. coffee roasters and grinders for stores.

Roofing.—See Building Material.

Roofing, etc.—R. E. Lightner Co., Engrs. and Contrs., Roanoke, Va.—80 squares No. 20 gauge corrugated roofing, about 6 ft. long; 20 squares No. 22 gauge corrugated siding; for foundry building.

Roofing.—Liberty Brick Co., J. H. Johnson, Mgr., Liberty, N. C.—150 to 200 squares iron or steel roofing for drying sheds; new or second-hand.

Safe.—See Bank Fixtures.

Sawmill.—Otis E. McCoy, Prest. Monkton Roller Mills, Mt. Washington, Md.—Sawmill equipment to cut and dry 50,000,000 ft. long-leaf yellow pine in Virginia.

Sawmill.—W. H. Moore Co., W. H. Moore, Prest., 625 Central Ave., Hot Springs, Ark.—5 or 6-ft. sawmill, 3 or 4-saw edger, 2-saw trimmer, lath machine and bolter.

Scales.—E. I. Reardon, Box 603, Sumter, S. C.—2 sets automatic scales with single dial; platform 4x4½ ft.

Scales.—Sumter Stemmary Co., E. I. Reardon, Secy., Sumter, S. C.—Data and prices on scales for tobacco stemmary.

Sewers.—Town of Aberdeen, N. C., J. T. Johnson, Mayor.—Bids until Feb. 10; construct sewer system; 2820 ft. 10-in. sewers, average depth 5 ft.; 14,615 ft. 8-in. sewers, average depth 6 ft.; sewer tank; plans, etc., from J. B. McCrary Co., Engr., Atlanta, Ga.

Shear (Metal).—Southern Steel Products Co., Virginia Railway and Power Bldg., Richmond, Va.—Bar shear to cut cold 1½ to 2 in.; second-hand.

Shovel.—Barboursville Clay Mfg. Co., Barboursville, W. Va.—Light steam shovel, tractor or caterpillar; ½ or ¾-yd. dipper.

Shovel (Steam).—A. P. Gilbert, Durham, N. C.—Steam shovel; ¾-yd. dipper; traction; first-class condition; immediate delivery.

Shovel (Steam).—Charles Rankin, Fayetteville, N. C.—Steam shovel to dig clay for 40,000 daily capacity brick mill; second-hand if good condition; delivery by March 1.

Sprinkling Carts.—Charles B. Metcalfe & Son, Contrs., San Angelo, Tex.—Sprinkling carts.

Spring (Coil).—W. E. Dinges, 1834 W. Pratt St., Baltimore, Md.—Names and addresses mfrs. of small coil springs.

Stacking Machinery.—Mexican Consul-General, New Orleans, La.—Names and addresses mfrs. mchy. for piling and sifting fuels.

Steam Specialties.—Northwestern Oil Equipment Corp., 2 N. 10th St., Minneapolis, Minn.—To represent mfrs. of steam specialties.

Structural Steel.—See Building Material.

Tar (Birch).—Lucian D. Wyllie & Co., 48 E. 41st St., New York.—Uncleaned birch tar.

Tanks.—Zwixite Corp., R. L. Montague, People's Office Bldg., Charleston, S. C.—Prices on steel tanks for fuel oil storage.

Tank and Tower.—Manufacturers' Selling Agency, Box 634, Birmingham, Ala.—25,000 to 50,000-gal. capacity tank on 50 to 75-ft. tower; second-hand preferred; state price, location, condition, weight, dimensions, time of shipment, name of original mfr.

Tank.—V. A. Bedreath, Morehead City, N. C.—Prices on wooden water tank.

Tanks, etc.—Northwestern Oil Equipment Corp., 2 N. 10th St., Minneapolis, Minn.—Steel storage tanks, 8000 to 15,000 gals.; truck tanks; delivery cans; steel barrels; funnels; etc.

Tank and Tower.—Empire Cotton Oil Co., R. E. Cook, Gen. Supt., Atlanta, Ga.—Second-hand, 50,000 to 60,000-gal. steel tank with 80-ft. steel tower.

Textile Machinery.—Lone Star Engineering Co., Richard H. Phillips, Consult. Engr., National Bank of Commerce Bldg., San Antonio, Tex.—Names and addresses of mfrs. mchy. for cotton spinning, mfr. cotton ducking, cotton twine and cordage, spinning wool yarn and knitting heavy hosiery, making woolen blankets.

Threading and Tying Machine.—Simplex Surface Contact Co., S. R. Hipple, Gen. Mgr., 150 W. 4th St., Williamsport, Pa.—String threading and tying machine for paper tags.

Tile.—See Building Material.

Tile.—A. L. Christenberry, Southwest National Bank Bldg., Oklahoma City, Okla.—Literature and prices on floor, porch and metal tile for residence.

Tractor Plant Machinery.—Armstrong Farm Tractor Co., Ira Armstrong, Sweetwater, Tex.—Bids about Mar. 1; farm tractor mfg. equipment.

Tractor Works Machinery.—Franklin

Tractor Co., Geo. Hills, Gen. Mgr., Greenville, O. — Large quantity and assortment mchy. for 1920; delivery begin Mch. 1; mchy. to include equipment for manufacturing and assembling automobiles; motors, electrical supplies, boring mills, shapers, presses, drills, power saws, pulleys, gears, fans, belts, tanks, castings, forgings, lathes, etc.; list in office of Manufacturers Record and furnished to inquirers by Franklin Tractor Co.

Vault.—See Bank Fixtures.

Wagons (Dump).—Charles B. Metcalfe & Son, Contrs., San Angelo, Tex.—10 dump wagons and trailers.

Water-works.—City, Ira Martin, Mayor, Henryetta, Okla.—Bids until Feb. 2; water-works; \$200,000 bonds; plans, etc., with Burns & McDonnell, Civil Engrs., Kansas City, Mo.

Water-works Equipment.—Town of Aberdeen, N. C., J. T. Johnson, Mayor.—Bids until Feb. 10; construct water-works; 150 G. P. M. triplex pump; 10 H. P. oil engine; 60,000-gal. tank on 75-ft. steel tower; 1950 lin. ft. 8-in. and 10,376 lin. ft. 6-in. C. I. pipe; 425 tons special castings; 6375 lin. ft. 1½-in. galvanized iron pipe; five 8-in. and fifteen 6-in. H. E. gate valves and boxes; twelve 1½-in. screwed valves and boxes; 23 standard fire hydrants; plans, etc., from J. B. McCrary Co., Engr., Atlanta, Ga.

Wire, etc.—High Point Machine Works, Sheeley E. Corbitt, Sales Engr., High Point, N. C.—Names and addresses mfrs. magnet, rubber covered and other electric wire, electrical instruments, etc.; for motor repair department.

Woodworking Machinery.—High Point Machine Works, High Point, N. C.—To represent mfrs. woodworking mchy.

Woodworking Machinery.—N. P. Cauthen, Brookville, Fla.—Woodworking machinery for furniture and crates.

Woolen Machinery.—See Textile Machinery.

Railroad Construction

Railways.

Fla., Miami.—Miami & Tampa Railway Co. has graded 15 mi. alongside of the Miami

Canal, and expects to have 25 mi. ready for operation by next fall. N. W. Parlee is Engr. Wm. C. Wolfe of Miami is Prest.

Ga., Macon.—Chamber of Commerce Com. on Transportation is taking preliminary steps to build a belt line to serve new industries. Survey committee appointed. H. C. Fowler is Chrmn. main committee.

La., Homer.—Reported that the Louisiana & Northwest R. R. will build an oil-fields branch 5 or 6 mi. long from a point 2 mi. north of Homer, with industrial sidings totaling about the same. S. C. Stafford is Engr. at Homer.

N. C., Greenville.—Greenville & Shelderville Railroad Co., recently chartered to operate a lumber line 15 mi. long, has organized with F. C. Harding, Prest.; W. L. Smith, V.-P.; W. L. Hall, Secy.; J. Frank Harrington, Secy.

N. C., Murfreesboro.—J. A. Campbell wires Manufacturers Record that an electric railroad is being organized between Franklin, Va., and Orlando, N. C., with headquarters at Murfreesboro. Organization will be completed within 15 days. Name is Chowan Railway & Power Co.

Okla., Bristow.—Oklahoma Southwestern Railway Co., G. E. Matt, auditor and treasurer, Miami, Okla., will build 50 mi., from Bristow to Okmulgee, Okla., through very rough country. Road not being constructed by contract. T. B. Slick, Prest.; J. A. Frates, V.-P.; G. E. Matt, Treas.; J. H. Grant, Secy.; J. A. Frates, Jr., Gen. Mgr.; W. Matthews, Ch. Engr.

W. Va., Mullens.—Virginian Railway will, it is reported, let contract immediately for the Virginian-Wyoming Railroad, to be 14½ mi. long from a point on the main line near Maen, 3½ mi. from Mullens, up Milan Creek, to develop coal lands. A. M. Traugott, Norfolk, Va., is Acting Ch. Engr.

Street Railways.

Md., Baltimore.—United Railways & Electric Co. will build some track connections, part of which will be double track; also some curves. Chas. D. Emmons is Prest.

Enlargement of Foundry.

The Dixie Brass & Foundry Co., whose works are at Sixth Ave. and 13th St. N., Birmingham, Ala., are building an addition to their foundry, the new building to be used for the manufacture of quality castings of gray iron and semi-steel. All equipment has been purchased for the improvement.

A New Sales Office.

The Trumbull Steel Co. of Warren, O., have opened a new sales office in Philadelphia at 532 Widener Bldg. J. B. DeWolf, from the New York sales force of the company, will temporarily have charge of this office.

Sales Representative.

A. S. Winter, formerly advertising and sales manager for the William Powell Company, has joined the sales force of the Fairbanks Company, Pittsburgh, Pa., and will represent them in Southern Ohio territory.

Assistant General Manager of Sales.

A. P. Van Schaick has been appointed assistant general manager of sales of the American Chain Co., Inc., this appointment being as of January 1. Mr. Van Schaick's headquarters are at the general sales offices of the company, Grand Central Terminal, New York City.

Of Interest to Machinery Trade.

Appointments are announced by the Sullivan Machinery Co., Chicago, as follows: Arthur E. Blackwood, formerly manager of the New York branch office, to be vice-president in charge of finance and accounting, his successor at New York being Louis R. Chadwick, who has been manager of the office at Spokane, Wash., for some years. Robert T. Banks, for several years sales engineer at the El Paso (Tex.) office, succeeds Mr. Chadwick at Spokane. Howard T. Walsh is appointed vice-president in charge of sales, Gilbert K. Wilson, assistant secretary in charge of cost accounting; Nathaniel H. Blatchford, Jr., assistant treasurer; Emil A. Krevis, general auditor, and Frederick W. Copeland, manager of foreign sales.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Commercial Blast Furnace Slag.

Approximately 90 per cent of the tonnage of commercialized blast furnace slag was represented at the annual meeting of the National Slag Association held at the office of that organization, 933 Leader Building, Cleveland, O., January 16. The result of the election of officers for the year 1920 follows: L. A. Beeghley, Standard Slag Co., Youngstown, O., president; C. E. Ireland, Birmingham Slag Co., Birmingham, Ala., vice-president; H. J. Love, secretary-treasurer. The executive committee will consist of the following: President L. A. Beeghley, Standard Slag Co., Youngstown, O.; E. H. Kuttner, Illinois Improvement & Construction Co., Chicago, Ill.; F. A. Sarstedt, Cleveland Macadam Co., Cleveland, O.; L. H. Hawblitz, France Slag Co., Toledo, O.; C. L. McKenzie, Duquesne Slag Products Co., Pittsburgh, Pa. Plans to enlarge the scope of work of the association were completed that will enhance the value of the technical and practical side of the material along the lines of diversified uses which have been advocated by the producers. The object of the organization is to bring recognition to the material as a standardized concrete aggregate in all classes of construction.

tion, a superior macadamizing agent, and a satisfactory railway ballast.

General Manager Appointed.

J. B. Johnston, formerly manager of the ordnance department, Crucible Steel Co. of America, Harrison, N. J., has been appointed general manager of the Standard Scale & Supply Co., Pittsburgh, Pa., which specializes in the building of railroad track scales and heavy-duty industrial scales.

General Engineering Work.

Service Engineering Co., 25 Church St., New York City, has been incorporated under the laws of the State of New York with capital stock of \$50,000 to render general engineering service and to specialize in the design of tools, jigs, fixtures and methods for interchangeable manufacturing of motor cars, motor trucks, typewriters, adding machines and other products made in quantities. The officers of the new company are Albert A. Dowd, president; Donald A. Baker, vice-president; Fred E. Rogers, treasurer; Thos. P. Orchard, secretary. The company employs a force of about sixty men to give engineering service on short notice.

Financial News

New Financial Corporations.

Ala., Alabama City.—A new bank is being organized, it is reported, by H. C. Dwigings of Petersburg, Tenn.

Ala., Slocumb.—Bank of Slocumb, recently chartered with \$25,000 capital, is authorized to begin business. J. R. Young, Prest.; G. H. Herring, Cash.

Ark., Clarksville.—Farmers' National Bank of Clarksville chartered; capital \$60,000; R. A. Morgan, Prest.; L. J. Van Brunt, Cashier.

Ark., Hendrickson.—Bank of Hendrickson, capital \$10,000, open for business Jan. 24; D. W. Hill, Prest.; Charles Irby, V.-P.; C. M. Harwell, Cash.

Fla., Chiefland.—Bank of Chiefland, a new concern, is chartered; capital \$16,000. Began business Jan. 15; O. N. Harper, Prest.; M. M. Ciyatt, V.-P.; C. J. Huber, Cashier.

Fla., Fort White.—A new bank with \$15,000 capital is organized with J. M. Sikes, Prest.; M. P. Moyer and Dr. W. E. Whitlock, V.-P.; L. E. McCall, Cash.

Fla., Lake Hamilton.—First National Bank of Lake Hamilton; capital \$25,000; applied for charter; Eugene C. Bryan and others.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Fla., Lake Worth.—People's Bank of Lake Worth has applied for charter; capital \$15,000, with privilege of increasing to \$100,000.

Ga., Enigma.—Bank of Enigma, capital stock \$15,000; applied for charter. Incprts.: E. F. Bussey, A. N. Dean, B. H. Dormeny, James McMillan, E. P. Bowen and E. H. McLeod.

Ga., Forsyth.—Bank of Forsyth, capital stock \$30,000; applied for charter. Incprts.: H. H. Hardin, C. M. Taylor, T. J. Hardin, O. B. Chapman and others.

Ga., Newnan.—First National Bank and the Coweta National Bank are planning, it is reported, to consolidate under the name of the First National Bank of Newnan.

Ky., Heller.—Bank of Heller is reported organized with \$15,000 capital.

La., Homer.—Commercial National Bank of Homer has applied for charter; capital \$100,000, surplus \$10,000. Incprts.: E. Wayles Browne and Geo. F. Stroud, Shreveport; E. H. Fortson, A. E. Wilder and A. Kinnebrew, Homer. Business is to begin as soon as charter is granted.

La., Monroe.—Louisiana Loan & Investment Corp., capital \$100,000, is chartered under the laws of Delaware; incorporators, Wm. F. O'Keefe, Geo. G. Stiegler and E. E. Aberle, all of Dover, Del.

Mo., Avondale.—Security State Bank organized; capital \$10,000. A. L. Kelsey, Prest.; W. A. McLeod, W. E. Balkey, V.-P.'s; P. D. Hodge, Cash.

Md., Baltimore.—Woodrow Building and Loan Assn., 712 E. Fort Ave., capital stock \$300,000, is inceptd.; incorporators, Chas. H. Stehli, Henry C. Fischer, Frank D. Robertson.

Md., Baltimore.—Ten Hills Building and Loan Association inceptd.; capital stock \$260,000. Incprts.: Geo. R. Ruhl, B. Woodward Hazell, David Thomas, Benj. F. Hearn and Geo. A. Eichhorn.

Md., Baltimore.—Federal Finance & Credit Co. organized; capital stock authorized, \$500,000 preferred, par \$100 and 5000 shares common, no par. James R. Pratt, Prest.; A. J. Fink, V.-P.; W. L. Rigger, Treas.

Md., Cumberland.—Liberty Trust Co., capital \$1,000,000, expects to begin business about Feb. 1. Hugh A. McMullen, Prest.; Thomas B. Flinn, Secy.; Charles G. Holzshu, Treas.

Miss., Canton.—Madison County Bank organized; capital \$125,000; W. B. Winer, Prest.; D. H. Blackton, V.-P.

Miss., Marks.—Citizens' Bank has changed name to Citizens' Bank & Trust Co., capital increased from \$25,000 to \$50,000, surplus \$12,500, chartered; P. M. B. Seef, Prest.; W. T. Covington, V.-P.; M. D. Brett, Cash.; Douglas Carr, Asst. Cash.

Miss., Meridian.—Guaranty Bank & Trust Co. is the new name adopted for the Guaranty Loan, Trust & Banking Co. of Meridian and charter has been amended accordingly; L. D. Caldwell, Prest., and C. M. Lawrence, Cashier.

Mo., Birchtree.—Farmers' State Bank; capital \$10,000; has begun business. Among those interested are: F. M. Walker, A. Scoville, W. N. Radford, Laurel Davis and Claude S. Smotherman.

Mo., Mound City.—Mound City Trust Co.; capital \$200,000, surplus \$50,000; will begin business Mch. 20. N. S. Magruder, Prest.; Joseph Dickson, V.-P. and Counsel; J. T. Dodds, V.-P. and Real Estate Officer; John C. Tobin, Treas.; R. G. White, Secy.

N. C., Bolivia.—Bank of Bolivia, capital \$10,000 authorized and \$5000 paid up, is chartered. Incprts.: E. H. Smith, T. H. Lindsay, both of Southport, N. C.; W. M. Willets and F. L. Lewis of Bolivia.

N. C., Charlotte.—Plans are being made to organize a building and loan association. Mayor E. L. Housed, L. D. Gribble, R. S. Lewis and others are interested.

N. C., Franklinton.—Commercial Bank of Franklinton is chartered; authorized capital stock \$50,000 with \$25,000 paid in. Incprts.: A. H. Adams, S. C. Vann and George Gillam of Franklinton.

N. C., Greensboro.—Security Life & Trust Co. of Greensboro, capital \$100,000; surplus \$50,000, is being organized by George A. Grimsley and C. C. Taylor, who have resigned, respectively, as chairman of the board and secretary of the Jefferson Standard Life Insurance Co. Proposed to begin business Mch. 1.

N. C., Mars Hill.—Farmers' Bank of Mars Hill, capital \$50,000, organized by R. S. Gibbs, Marion; W. B. Ramsey, Marshall, and others.

N. C., Salisbury.—Farmers' Realty Stock & Bond Co., authorized capital \$20,000, inceptd. by W. J. McDaniels, John C. Busby and W. F. Fleming.

N. C., Vass.—Commerce Bank & Trust Co., authorized capital \$25,000, inceptd. by John D. Blue, Vass; Guy M. Field and E. T. Hall, Jr., Raleigh.

Okla., Enid.—American National Bank of Enid chartered; capital \$200,000; T. E. Vessels, Prest.; Floyd E. Felt, Cashier.

Okla., Lehigh.—First State Bank chartered; capital \$15,000, surplus \$3000; began business Jan. 15. S. A. Maxwell, Prest., Coalgate, Okla.; C. H. Smith, V.-P., and W. A. Jones, Cash., Lehigh.

Okla., Oklahoma City.—Tradesmen's National Bank, a conversion of the Tradesmen's State Bank, has \$250,000 capital and \$50,000 surplus. Frank J. Wilkoff, Prest.; C. M. Bosworth, V.-P.; E. A. Walker, Chrmn.; C. P. Vance, Cash.; F. P. Morey, Asst. Cash.

S. C., Allendale.—Home Building and Loan Association chartered; capital stock \$50,000; W. I. Johns, Prest.; J. S. Spigener, V.-P.; W. T. Gooze, Secy.-Treas.

S. C., Charleston.—Surety Building & Loan Association organized; capital \$150,000; began business Jan. 15, 1920. R. G. Rhett, Prest.; W. L. Douglas, V.-P.; T. T. Hyde, Treas.; R. G. White, Secy.

S. C., Charleston.—American Finance Corporation inceptd.; capital \$5000; is to begin business immediately. J. K. Nettles, Prest.; Joseph E. Jenkins, V.-P., Secy. and Treas.

S. C., Charleston.—Charleston Mutual Savings Bank chartered; capital \$25,000. Edward T. Edwards, Prest.; Chas. C. Jacobs, V.-P.; J. R. Randolph, Secy.; Richard H. Mickey, Cash.

S. C., Cowpens.—Bank of Cowpens chartered; capital \$25,000; D. C. Ross, Prest.; W. M. Webster, V.-P.; E. O. Webster, Cash. Business began Jan. 10.

S. C., Greenville.—Greenville Co-operative Building Association chartered; capital \$8000. Wm. G. Ulrich, Prest.; M. A. Galloway, V.-P.; W. H. Shannon, Secy., and I. H. Ambrose, Treas.

S. C., Rains.—Bank of Rains commissioned; capital \$10,000. Petitioners: M. F. Morris, J. B. James, W. R. James and M. E. Bryan.

Tex., Cross Plains.—First Guaranty State Bank, capital stock \$30,000, is authorized to begin business; Virgil Hart, Prest.; C. C. Neeb, Cashier. (Conversion of the Bank of Cross Plains, a private concern.)

Tex., Custer City.—People's State Bank chartered; capital \$10,000; J. H. Hoberecht and D. Wilson, Custer City; F. G. Delaney, Fort Worth.

Tex., Dalhart.—Citizens' State Bank, capital stock \$50,000, is authorized to begin business;

Lon S. McCrary, Prest., and L. B. Steel, Cashier.

Tex., Dallas.—Guaranty Bank & Trust Co. chartered; capital \$100,000; Geo. S. McGee, Prest.; Asher Mintz, Cash.

Tex., DeLeon.—Guaranty State Bank chartered; capital \$60,000; B. J. Pittman, Prest.; J. D. Miller, G. H. Harman and C. W. Meadow, V.-Ps.; Evan Barker, Cash. Business is to begin March 1.

Tex., Graham.—Guaranty State Bank chartered; capital \$25,000; Arthur Maulding, Prest.; L. B. Wiggins, Asst. Cash.

Tex., Marlin.—Citizens' State Bank; capital 100,000; will begin business about Feb. 1; J. C. Fountain, Prest.; Dr. N. D. Bule, V.-P.; L. J. Davis, Cash.

Tex., Necessity.—First National Bank of Necessity; capital \$25,000; applied for charter; J. P. Crowley and others.

Tex., Robert Lee.—First Guaranty State Bank chartered; capital \$30,000; W. J. Adams, Prest.; B. E. Hamilton, Cash. This is a conversion of the First National Bank of Robert Lee.

Tex., San Angelo.—Texas Banking Co. chartered; capital \$5000. Incprts.: W. J. Boehme, E. F. Beck, Jr., N. J. Hudson.

Tex., Wichita Falls.—State Trust Co., capital stock \$150,000, is authorized to begin business; R. E. Huff, Prest.; Wm. E. Huff, Treas.

Va., Alexandria.—International Finance Corp. of Alexandria chartered; capital stock, maximum \$5,000,000 preferred and 50,000 shares common; minimum \$1000 preferred; E. Fletcher Greene, Prest.; Alex. T. Douglas, Secy., and Chas. S. Douglas, all of Washington, D. C., incorporators.

Va., Marion.—A new National bank, capitalized at \$75,000, is organized, with R. T. Greer, Prest.; R. C. Gwynn, V.-P.

New Securities.

Ala., Dothan — (Sewer).—Bids will be received until 8 P. M. Feb. 9 (postponed from Feb. 8) for \$40,000 of 5 per cent \$1000 denomination bonds to be issued Mch. 1, 1920. R. W. Lisenby is City Clerk.

Ala., Dothan — (Water).—Bids will be received until 8 P. M. Feb. 9 (postponed from Feb. 8) for \$30,000 of 5 per cent \$1000 denomination bonds to be issued Mch. 1, 1920. R. W. Lisenby is City Clerk.

Ala., Mobile — (Road, Bridge).—Sold to Steiner Bros., Birmingham, Ala., at par and expenses (\$4285), \$150,000 of 5 per cent \$1000 denomination 20-year bonds of Mobile County offered Jan. 17.

Fla., Brooksville.—(Road).—Hernando County votes March 6 on bonds; H. C. Mickler, Clk. County Commrs.

Fla., Gainesville.—(School).—Alachua County School Board has decided to issue \$75,000 of time warrants to pay off outstanding indebtedness.

Fla., Jacksonville.—(Viaduct, Sewers, Paving).—Sold to the Atlantic National Bank and the Florida National Bank, both of Jacksonville, at a premium of \$1682.40, on Jan. 20 \$600,000 of 5 per cent \$1000 denomination 30-year bonds, voted Aug. 5, and dated Sept. 1, 1919.

Fla., Milton.—(Road).—\$110,000 of an authorized issue of \$160,000 of 6 per cent 30-year \$1000 denomination bonds Dist. No. 3, Santa Rosa County, have been purchased by the Hanchett Bond Co., Chicago. H. M. Thompson is County Clerk.

Fla., Okeechobee.—(Street, Water, Sewer).—\$125,000 of 6 per cent bonds have been purchased at 100.80 by the Bank of Okeechobee.

(Continued on Page 160)



Cletrac
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1920 — The Biggest Road Building Year

Four times as much road building work in 1920 as in any previous year, everybody busy, labor costly—and mighty hard to get.

You've got to speed up every operation, cut corners on costs at every turn, crowd every minute to the limit.

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The Cletrac costs less than other power units that can do only a few of the regular Cletrac jobs—and its upkeep is less than the six or eight horses or mules it can easily replace.

Prepare for your rush work—don't wait until it catches you. You may not be able to get a Cletrac then. Buy your Cletrac *now*.

The Cleveland Tractor Co.

19187 Euclid Avenue, CLEVELAND, OHIO

Largest Producers of Tank-Type Tractors in the World

Fla., Orlando—(School).—Orlando School Dist. will probably issue \$150,000 bonds. Address School Board.

Fla., Sumterville—(Road).—\$750,000 Sumter County bonds reported voted on Jan. 20. Address County Commrs.

Fla., Wauchula—(School).—\$15,000 of bonds are voted. Address School Board.

Ga., Hartwell—(School).—Recent report that an election would be held Jan. 20 on \$4000 bonds of Vanna School Dist., Hart County, is denied by J. B. Blackmon, Clerk County Commrs.

Ga., Hogansville—(School).—City has applied to validate \$30,000 of 5 per cent \$1000 and \$2000 denomination serial bonds, 1921-1948, dated March 1, 1920; R. H. Utting is Clerk City Court.

Ga., Thomasville—(School).—Election is to be held Mch. 10 to vote on \$100,000 of bonds. Address The Mayor.

Ky., Georgetown—(Water, Light).—Bids will be opened Feb. 13, it is reported, for \$100,000 of bonds. Address The Mayor.

Ky., Paducah—(School).—Bids will be received until 4 P. M. Feb. 12 for \$250,000 of 5 per cent school-improvement bonds. Address Board of Education. Ralph Yakel is Supt. of Schools. For particulars see *Proposals Department*.

Ky., Whitesburg—(Road).—Election is to be held in Letcher County to vote on bonds. Address County Commrs.

La., Baton Rouge—(Road).—\$125,000 of 5 per cent Seventh Road Dist., East Baton Rouge Parish, bonds have been sold as follows: Louisiana National Bank and Bank of Baton Rouge, each \$50,000; Union Bank, \$25,000.

La., Broussard—(Light).—Election is to be held Feb. 24 to vote on \$8000 of 5 per cent not exceeding 12-year bonds for electric-light system; L. J. Morvant, Mayor.

La., De Ridder—(Special dispatch to the Manufacturers Record says Police Jury Beauregard Parish reoffers for public sale Jan. 31, 2 P. M., bonds offered Sept. 25; Road Dist. No. 2, \$150,000; Road Dist. No. 3, \$150,000; Road Dist. No. 4, \$100,000; Road Dist. No. 6, \$100,000. Bonds dated Sept. 1, maturing May 1 serially. D. W. McFlater is Secy. and Treas. For particulars see *Proposals Department*.

La., Harrisonburg—(Road).—Bids will be received until noon Feb. 16 for \$690,000 of 5 per cent serial bonds, 1921-1960, dated Feb. 1, 1920, as follows: Catahoula Parish Road Dist. No. 1, \$400,000, denomination \$1000; Road Dist. No. 2, \$220,000, denomination \$1000; Road Dist. No. 3, \$70,000, denomination \$500. J. M. Henagan is Secy. Police Jury.

La., Kaplan—Bids will be received until 8 P. M. Feb. 3 for \$40,000 of 5 per cent 20-year serial \$500 denomination water and light plant improvement bonds; dated Dec. 1, 1919; Eugene Eleazar, Mayor; C. F. Clavery, Clerk.

La., Lake Charles—(Drainage).—Bonds of Bell City Drainage Dist. No. 1, which is principally in Calcasieu Parish, but also includes parts of Cameron and Jefferson Davis Parishes, were voted on Jan. 13 as follows: \$135,000 of 5 per cent, 1920-1949, inclusive, and \$90,000 of 5 per cent, 1920-1944, inclusive. Bids will be received for these bonds on Saturday, Feb. 14, at Bell City, La. McCoy & Moss, lawyers, Lake Charles, La., may be able to give further information.

La., Lake Charles—(Road).—\$125,000 of 5 per cent 15-year \$1000 denomination Calcasieu Parish bonds voted Oct. 19 were purchased Jan. 6 at par and interest by the Hibernia Bank, New Orleans. (Lately noted.)

La., Opelousas—(Road).—Bids will be received until 11 A. M. Feb. 2 for the following St. Landry Parish Road Dist. bonds: \$85,000

Dist. 1 and \$80,000 Dist. 8. F. Octave Pavy is Prest. Police Jury.

La., Pineville—(Water).—Election is to be held March 23 to vote on \$55,000 of 5 per cent 22-year bonds. U. T. Downs is Mayor.

La., Shreveport—(School).—School Dist. No. 1, including the City of Shreveport, Jan. 14 voted \$500,000 of 5 per cent semi-annual 20-year serial \$1000 denomination bonds. Address Supt. Caddo Parish School Board.

Md., Cumberland—(School).—Allegany County School Board has decided to ask for a bond issue of \$700,000 for school improvements and \$365,000 for teachers' salaries.

Miss., Belzoni—(Paving, Water, Light).—Election called Jan. 29 on \$275,000 bonds. Address Town Council.

Miss., Biloxi—(Street).—Election is to be held in February to vote on \$350,000 bonds. Address The Mayor.

Miss., Indianola—(Drainage).—Bids will be received until 11 A. M. Feb. 3 for \$120,000 of 20-year serial \$1000 denomination Shaw Drainage Dist., Sunflower County, bonds; interest at 6 and 5½ per cent; L. G. Dean, M. Tonkel and J. W. Wellenman, Commrs. For particulars see *Proposals Department*.

Miss., Magnolia—(Road).—\$100,000 Fourth Road Dist., Pike County, bonds have been purchased at par, accrued interest and \$627.50 premium by the Bank of Commerce & Trust Co., Memphis.

Miss., Meridian—(Warrants).—Board of Supvrs., Lauderdale County, gives notice of intention to issue a loan warrant for \$30,000; interest not exceeding 6 per cent. Geo. F. Hando is Clk. of the Board.

Miss., Meridian—(School).—Board of Supvrs. Lauderdale County will offer for sale in February \$5500 of bonds of Suqualena Consolidated School Dist.

Miss., Moss Point—(Street).—Bids will be received until 8 P. M. Feb. 4 for \$25,000 of street-improvement bonds, subject to favorable election Feb. 3. Geo. W. O'Neill is Prest.; C. M. Fairley, Clk. For particulars see *Proposals Department*.

Miss., Quitman—(School).—\$5000 Shady Grove Consolidated School Dist., Clarke County, bonds will be offered for sale Feb. 3. Address Clerk, Board of Supvrs.

Miss., Water Valley—(School).—Bids will be received until noon Jan. 20 for \$10,000 of 5 per cent \$500 denomination bonds, dated Feb. 1, 1920, maturing \$1000 yearly from Feb. 1, 1921, to 1939, inclusive. Address F. B. DeShou.

Miss., Water Valley—(Road).—Bids will be received until noon Jan. 20 by W. A. Nelson for \$60,000 of 5 per cent \$1000 denomination bonds Yalobusha County Road Dist. No. 3.

Mo., Carthage—(Road).—\$500,000 of 5½ per cent \$1000 denomination 2-16-year serial bonds of Joplin special road district, Jasper County, dated Oct. 1, 1919, and recently reported sold to the Conqueror Trust Co. of Joplin are being offered by Kauffman-Smith-Ewert Investment Co. of St. Louis, and Harris Trust & Savings Bank, Chicago.

Mo., Kennett—(Road).—\$1,200,000 of bonds were voted in Dunklin County on Jan. 20. Address County Commrs.

Mo., Kirkwood—(Water, Improvement).—\$30,000 of 5 per cent \$500 denomination water extension and improvement bonds were purchased Jan. 5 by National Bank of Commerce; E. O. Harper, City Clerk.

Mo., Sarcoux—(Water).—\$9000 of 5 per cent bonds were recently voted. Address The Mayor.

Mo., Sedalia—(City Hall, Hospital).—Bids will be received until Feb. 16 for \$100,000 city hall and \$10,000 hospital 5 per cent \$1000

denomination serial 20-year bonds dated Jan. 1, 1920. Address City Council. N. L. Nelson is City Clk.

Mo., Sedalia—(Road).—A letter to the Manufacturers Record says that it is not expected to go outside of the State to sell the road bonds authorized last summer. Address David Roberts.

Mo., Sedalia—(Bridge, etc.).—Election is to be held in Pettis County Feb. 17 to vote on \$165,000 bonds, as follows: Bridge, \$50,000; repair and improvement of County Home, \$40,000; jail, \$75,000. Address County Commrs.

Mo., Springfield—(School).—\$800,000 city bonds failed at the election Jan. 20 for lack of a two-thirds majority. Address School Board.

Mo., Sweet Springs—(Light Plant).—Election Feb. 3 on \$20,000 of city bonds. J. J. Smith is Mayor.

Mo., Webb City—(Park).—\$10,000 of 5 per cent bonds have been purchased at par and interest, less \$90 for expenses, by Harry P. Stix, St. Louis.

N. C., Aberdeen—(Water, Sewer).—Bids will be received until 5 P. M. Feb. 10 for the following 6 per cent \$1000 denomination bonds, dated Jan. 1, 1920: \$45,000 water, maturing serially Jan. 1, 1922 to 1960, inclusive; \$28,000 sewer, maturing serially 1922 to 1939, inclusive. For particulars see *Proposals Department*.

N. C., Asheville—(School).—Election will probably be called to vote on \$35,000 bonds Chandler Special School Tax Dist., Buncombe County. Address County Commrs.

N. C., Asheville—(School).—Election will probably be called to vote on \$10,000 Reem's Creek Township, Buncombe County, bonds. Address County Board of Education.

N. C., Cornelius—(Light).—Bids will be received until noon Feb. 7 for \$10,000 of 6 per cent \$500 denomination bonds, dated Feb. 1, 1920, maturing one bond annually thereafter. J. B. Readling is Mayor.

N. C., Gastonia—(School).—City School Board contemplates issuing \$550,000 bonds for high school; also improvements. J. S. Wray is Supt.

N. C., Graham—(School, Sewer).—City voted \$50,000 school and \$100,000 sewer bonds.

N. C., Greensboro—(Courthouse).—\$250,000 of 5 per cent serial Guilford County bonds have been purchased at \$401 premium by banks of Greensboro and High Point.

N. C., Leicester—(School).—Turkey Creek special school tax district has voted \$12,000 bonds. Address School Board.

N. C., Oxford—(School).—Stovall School Dist., Granville County, votes Feb. 14 on \$25,000 of 6 per cent 20-year bonds. J. R. Davis is Chrmn. Board of County Commrs.

N. C., Plymouth—(School).—\$60,000 of bonds of Plymouth Graded School Dist. voted July 8, 1919, are 6 per cent 10-30 optional, dated Jan. 1, 1920. Address W. R. Hampton, Chrmn. School Board.

N. C., Sanford—(Road).—Bids will be received until noon Jan. 21 by Commrs. of Lee County, T. A. Riddle, Chrmn., for \$25,000 of 5½ per cent bonds; dated Jan. 1, 1920; payable Jan. 1, 1940; denomination to suit purchaser.

N. C., Smithfield—(Road).—\$50,000 of 5 per cent \$1000 denomination bonds Oneals Township, Johnston County, have been purchased by the Hanchett Bond Co., Chicago.

Okla., Cherokee—(School).—\$60,000 bonds reported sold at par to the Alfalfa County National Bank of Cherokee.

Okla., Henryetta—(Water-works).—Bids will be received until 10 A. M. Feb. 2 for \$300,000 of

(Continued on Page 162)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



You can have roads like these—

If there are, in your community, plain macadam roads that are beginning to wear in spots, or to "ravel," you certainly ought to know about this Marquette-Negaunee Road—

It will show you how, at small expense, you can save your roads and make them smooth, dustless and durable.

Like many roads built in this country a few years ago, this Marquette-Negaunee road was plain water-bound macadam construction. But after it had been in use for a while the road authorities of Marquette County discovered that plain macadam would not stand up under the torture of modern traffic.

The road authorities had to find some way to save their road, which is an important main highway carrying heavy traffic. They turned to Tarvia as the surest and most economical solution of the problem.

They treated the road surface with "Tarvia-B" in 1917. In some places where the wear had been particularly severe a second treatment was applied in the summer of 1918.



Three different sections of Marquette-Negaunee Road, Marquette County, Mich. These roads were water-bound macadam, surface-treated with "Tarvia-B" in 1917 and 1918. This is the main line of travel between the busy mining cities of Ishpeming and Negaunee, Mich. A traffic census revealed the passage over this road of 1080 vehicles per day, the majority of which were automobiles.

Today, instead of a ruined macadam road which would soon have to be rebuilt at great expense, Marquette County has one of the finest stretches of road in all Michigan, as the photographs show.

And the road can be kept in this same wonderful condition at small expense by occasional Tarvia treatments.

Advice on your own road problem can be had from the nearest Barrett office.

Tarvia

Preserves Roads-Prevents Dust

Special Service Department

This company has a corps of trained engineers and chemists who have given years of study to modern road problems. The advice of these men may be had for the asking by anyone interested. If you will write to the nearest office regarding road problems and conditions in your vicinity, the matter will be given prompt attention.

The Barrett Company

THE BARRETT COMPANY, Limited:

New York
Cincinnati
Minneapolis
Duluth
Lebanon

Chicago
Pittsburgh
Nashville
Dallas
Youngstown
Montreal

Philadelphia
Detroit
Salt Lake City
Milwaukee
Toledo
Toronto

Columbus
Winnipeg

Richmond
Vancouver

Lafayette

Bethlehem
St. John, N. B.

Boston
New Orleans
Seattle
Bangor
Elizabeth

St. Louis
Birmingham
Peoria
Washington
Buffalo

Cleveland
Kansas City
Atlanta
Johnstown
Baltimore
Sydney, N. S.

5 per cent 20-year city bonds. Address H. B. Evans, City Clerk. For particulars see *Proposals Department*.

Okla., Hobart—(Light).—Concerning report that the city would vote soon on \$135,000 bonds Mayor S. B. Nix says: "No bond issue pending for city at present; hardly probable there will be for several months."

Okla., Holdenville—(Water-works).—Election is to be held Jan. 23 to vote on \$20,000 water-works improvement bonds. Address The Mayor.

Okla., Madill—(Water-works).—Voted Jan. 15: \$350,000 of city bonds. F. L. Yarger is City Clk.

Okla., McAlester—(Road).—\$45,000 of 5½ per cent 25-year \$1000 denomination bonds voted Jan. 20 have been purchased by G. W. and J. E. Piersoll, Oklahoma City.

Okla., Tishomingo—(Road).—\$39,000 of Thomas Township, Johnson County, bonds have been purchased by Geo. I. Gilbert of Oklahoma City.

S. C., Rock Hill—(Water Sewer, Street).—Bids will be opened Feb. 18 for \$100,000 water, \$50,000 sewer and \$100,000 street bonds. Address The Mayor.

S. C., Greenville—(School).—Bill has been introduced in the Legislature to authorize Greenville city school trustees to issue \$250,000 of 5 per cent 20-year bonds. Address City School Board.

S. C., Walterboro—(Street).—Bids will be received until 8 P. M. Feb. 17 for \$40,000 of 6 per cent \$1000 denomination bonds, dated Jan. 1, 1920, and maturing Jan. 1, 1923 to 1960, inclusive, with privilege of redeeming the last \$20,000 Jan. 1, 1943, or on the first of Jan. of any year thereafter before maturity. D. B. Black is Clerk and Treas. For particulars see *Proposals Department*.

Tenn., Coalmont—(Road).—\$200,000 of 5½ per cent serial \$1000 denomination Grundy County bonds, dated July 1, 1919, have been purchased at \$204,000 by Caldwell & Co., Nashville.

Tenn., South Pittsburg—(Sewer).—\$50,000 of 6 per cent bonds have been purchased by Caldwell & Co. Address The Mayor.

Tex., Corpus Christi—(Road).—Sold to the Kauffman, Smith, Emert Investment Co. of St. Louis, \$1,000,000 of 5½ per cent serial 1-40-year bonds \$1000 denomination dated Aug. 1, 1919, at a premium of \$14,208.33; Gilbert McGloin is County Clerk.

Tex., Port Lavaca—(Road).—Election ordered Feb. 14 on \$100,000. Calhoun County bonds. Address County Commrs.

Tex., Harlingen—(Water).—\$650,500 of 6 per cent 1-40 serial bonds of Cameron County Water Improvement Dist. No. 1 were recently purchased by J. L. Arlitt, Austin, Tex.

Tex., Hondo—(Road).—\$400,000 of an authorized issue of \$800,000 of 5½ per cent Medina County bonds have been purchased at par, accrued interest and \$1500 premium by Harold G. Weiss & Co., Houston.

Tex., Huntsville—(Road).—Kittrell Road Dist., Walker County, 5 per cent \$500 denomination bonds, dated Oct. 1, 1919, and maturing serially Oct. 1, 1920, to Oct. 1, 1943, will be sold at private sale. These bonds were offered Jan. 12. W. A. Leigh is County Judge.

Tex., Lubbock—(Paving).—Bids will be received until Feb. 15 for \$100,000 6 per cent 10-40-year bonds. J. R. Germany is City Secy.

Tex., Lufkin—(Paving, Sewer Purchase and Extension).—Sold Jan. 17 to the Guaranty State Bank & Trust Co. of Lufkin at a premium of \$5000 5 per cent city bonds as follows: \$100,000 paving, \$35,500 for purchase Lufkin Sanitary Sewer Corp. and \$13,500 sewer extension.

Tex., Tyler—(Sewer).—\$100,000 of 5½ per cent bonds were authorized at election Jan. 15. Address Frank E. Williams, Chrmn. City Commissioners.

Tex., Waxahachie—(Water, Sewer, Street, etc.).—\$236,000 of 5 per cent serial 1922-1960, inclusive, \$500 and \$1000 denomination bonds, dated Jan. 1, 1920, are being offered by the First National Bank and the Kauffman-Smith-Emert Investment Co., both of St. Louis.

Tex., Wichita Falls—(Water).—Voted Jan. 17: \$800,000 of bonds. Address The Mayor.

Va., Covington—(Street Paving).—\$125,000 of bonds were voted Jan. 15; bids will be received until 8 P. M. Feb. 20. Address J. H. Overholt, Town Clerk.

Va., Norfolk—(Water).—Election is to be held Feb. 17 to vote on \$6,000,000 of 5 per cent 35-year bonds. R. E. Steed is City Clk.

Va., Portsmouth—(School).—Norfolk County Board of Supvrs. is considering question of issuing \$300,000 of bonds.

W. Va., Morgantown—(Road).—\$300,000 of Cass Dist., Monongalia County, bonds voted recently have been approved by the Attorney-General. Address County Commrs.

W. Va., Moorefield—(Railroad Aid).—\$10,000 bonds of Moorefield Dist., Hardy County, were voted Dec. 20 to aid construction of Moorefield Southern Railroad, but will not be issued until about 12 mi. of line are built, which may be next fall. C. B. Welton is County Clerk.

Financial Notes.

Georgia National Bank, Athens, Ga., has increased capital from \$200,000 to \$400,000.

First National Bank of Hartselle, Ala., will increase capital from \$50,000 to \$100,000.

Bank of Lexington, Lexington, Ky., increased capital from \$200,000 to \$300,000.

Bank of Germantown, Germantown, Ky., increasing capital from \$16,500 to \$25,000.

Bank of Alexandria, Alexandria, Ky., increased capital from \$15,000 to \$25,000.

Home Bank of St. Matthews, S. C., has increased capital from \$25,000 to \$50,000.

Charlotte Morris Plan Co., Charlotte, N. C., will increase capital from \$75,000 to \$500,000.

Bamberg Banking Co., Bamberg, S. C., has increased capital from \$55,000 to \$200,000.

Bank of Clarksdale, Miss., will increase capital from \$100,000 to \$200,000.

Savings Bank of Norfolk, Norfolk, Va., will increase capital from \$100,000 to \$200,000.

Exchange Bank of Friar's Point, Miss., will increase capital from \$25,000 to \$100,000.

First Guaranty State Bank, Pittsburg, Tex., has increased capital from \$50,000 to \$75,000.

Bank of Damascus, Damascus, Va., will increase capital from \$25,000 to \$50,000.

Planters' Bank of Wilson, N. C., has voted to increase capital from \$50,000 to \$100,000.

First National Bank of Walters, Okla., has increased capital from \$25,000 to \$50,000.

Farmers & Merchants' Bank, Merkel, Tex., increased capital from \$25,000 to \$50,000.

First National Bank of Okmulgee, Okla., increased capital from \$150,000 to \$300,000.

Liberty National Bank of Oklahoma City, Okla., increased capital from \$300,000 to \$500,000.

First National Bank of Hugo, Okla., increased capital from \$75,000 to \$100,000.

Morgan County National Bank, Albany, Ala., has increased capital from \$100,000 to \$200,000.

Citizens' National Bank of Glasgow, Ky., increased capital from \$40,000 to \$60,000.

Norwood National Bank of Greenville, S. C., increased capital from \$250,000 to \$500,000.

First National Bank of Cherryvale, N. C., has increased capital from \$50,000 to \$100,000.

First National Bank, Pittsburg, Tex., plans to increase capital from \$50,000 to \$100,000.

Bank of Fruitland, Fruitland, Md., increased capital from \$12,000 to \$25,000.

Exchange Banking & Trust Co., Charleston, S. C., increased capital from \$50,000 to \$100,000.

Farmers and Merchants' Bank, Salisbury, Md., increased capital from \$65,000 to \$100,000.

Farmers and Merchants' Bank, Williston, S. C., increased capital from \$15,000 to \$25,000.

Union Bank & Trust Co., Batesville, Ark., increased capital from \$75,000 to \$100,000.

First State Bank, Rush Springs, Okla., will increase capital from \$10,000 to \$25,000.

Bank of Maryville, Maryville, Tenn., increased capital from \$50,000 to \$100,000.

First National Bank of Maryville, Tenn., increased capital from \$50,000 to \$100,000.

Guaranty Title & Trust Co., Norfolk, Va., increased capital from \$500,000 to \$1,000,000.

Planters' Bank, Clarksdale, Miss., increased capital from \$100,000 to \$800,000.

Bank of Clarksdale, Clarksdale, Miss., increased capital from \$100,000 to \$200,000.

Sumter Trust Co., Sumter, S. C., will increase capital from \$50,000 to \$100,000.

St. Matthews National Bank, St. Matthews, S. C., will increase capital from \$30,000 to \$160,000.

Farmers' Bank & Trust Co., St. Matthews, S. C., will increase capital from \$35,000 to \$70,000.

Pittsburg National Bank, Pittsburg, Tex., plans to increase capital from \$50,000 to \$100,000.

The Jefferson-Gravois Trust Co., St. Louis, Mo., has increased capital from \$150,000 to \$200,000.

New Waverly State Bank, New Waverly, Tex., will increase capital from \$25,000 to \$40,000.

Calcasieu National Bank, Lake Charles, La., increased capital from \$500,000 to \$700,000.

Southwest Louisiana Farm Mortgage Co. Inc., Lake Charles, La., increased capital from \$250,000 to \$350,000.

Wilkin-Hale State Bank of Oklahoma City, Okla., will increase capital from \$100,000 to \$200,000.

First Building and Loan Assn. of Hickory, N. C., will increase capital stock from \$1,500 to \$5,000,000.

Farmers & Merchants' Bank of Johnsonville, S. C., has increased capital stock from \$10,000 to \$25,000.

Merchants & Planters' Bank of Gunnison, Miss., has increased capital from \$15,000 to \$50,000.

Broadway Savings Trust Co. of St. Louis, Mo., has voted to increase capital from \$100,000 to \$300,000.

Bank of Plainview, Plainview, Ark., has voted to increase capital from \$25,000 to \$60,000, paid up.

Commercial National Bank of High Point, N. C., has increased capital from \$150,000 to \$500,000.

Jackson Banking Co., Jackson, Ga., will increase capital from \$50,000 to \$100,000, and surplus from \$10,000 to \$20,000.

As a result of the resignation of Ex-Governor Edwin Warfield from the presidency of the Fidelity & Deposit Co., Baltimore, Va. Lear Black has been elected chairman of the board and Thomas A. Whelan, Pres. Chas. R. Miller was elected 1st V. P. to succeed Mr. Whelan, and William Hugh Harris, 2d V. P. to succeed Mr. Miller.

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